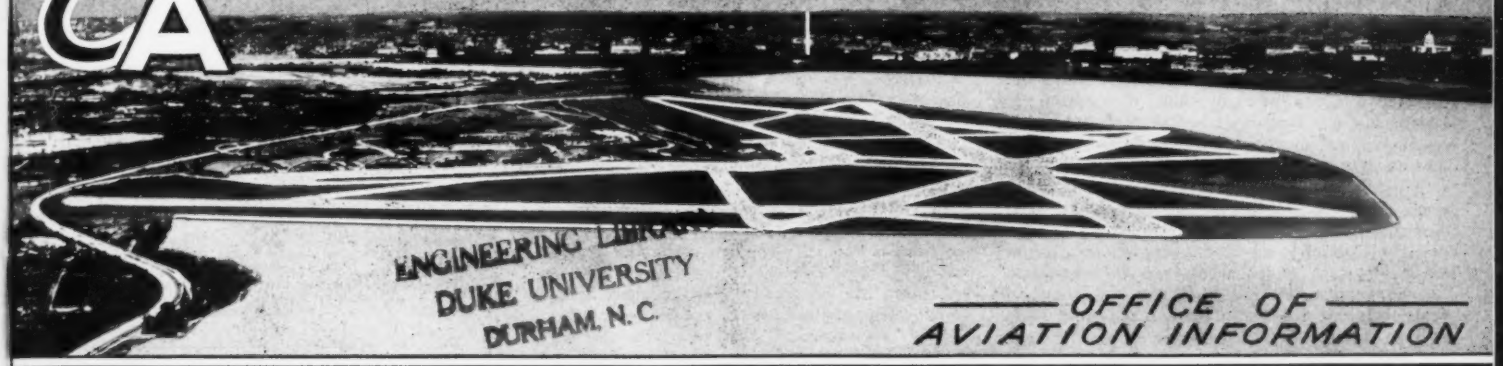
CAA JOURNAL



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CAB Takes First Action On Special Board Proposals

Acting on recommendations of the President's Special Inquiry Board on Air Safety, the Civil Aeronautics Board has proposed new safeguards for flights over mountains in bad weather.

Under the proposed rules air liners would be required to carry radar indicators marking the plane's distance from the ground, and to fly at higher altitudes over mountains in bad weather. The CAB also contemplates a return to the requirement that air liners carry automatic flight recorders.

Device Warns Pilots.—The terrain proximity indicators are expected to warn pilots when they come within 2,000 and 1,000 feet of the ground, and also to give similar warnings at any predetermined altitude between 300 and 500 feet. The CAB proposes a 2-year trial of the indicators beginning January 1, 1948.

The proposed higher flying rule would add another 1,000 feet to the required clearance over mountainous areas in bad weather. Air liners on night flights over unlighted airways or in instrument weather would be required to clear the highest ground on the route at 2,000 feet in place of the 1,000-foot altitude presently required.

The automatic flight recorder, dropped as required equipment because of war material shortages, indicates the plane's path through the air and also shows the effect of rough air on the plane. The recorder is used as an aid to enforcement of flight rules and investigation of accidents.

Reports to the President.—The indicator and altitude recommendations were made by the special inquiry board in one of a series of reports it has been making to the President in the interest of safer air-line travel.

The radar device, used as a secondary aid to the pressure altimeter, will help reduce accidents stemming from altimeter errors, the special board pointed out in its report. With the altimeter depending on barometric pressure and the accurate conveyance of that pressure to an airplane in motion, errors in recording absolute heights may be caused by changes in temperatures and pressure, high winds, and stoppages in the static tubes, the report stated.

Although the devices are not fully perfected, the inquiry board believes they are satisfactory enough for immediate use. Continued study after installation will have the benefit of experience, the board suggests, and if the result is a better device, the recommended aids can be scrapped for the newer and better instruments.

Several different types of electronic indicators are now becoming available. They are inexpensive and can be installed without introducing additional or confusing burdens in cockpit procedures, the inquiry board said.

Asks Further Changes.— In addition to the problem of clearing mountains, the inquiry board devoted a later report to measures designed to prevent pilots from "feeling their way down" from low visibility instrument conditions to reported or hoped-for visual conditions. This practice was probably responsible for a number of accidents in the past, the board stated. The changes recommended are:

1. Nation-wide standardization of the minimum en route and initial approach altitudes in instrument weather for passenger transports.

2. Raising of the minimum en route altitude from 500 feet to 1,000 feet above the ground in instrument weather.

3. That pilots fly according to instrument rules unless they have 3 miles visibility and 500 feet vertical separation from the clouds. Variations from

(*See page 91*)

Army Lets CAA Keep Three GCA Sets Now in Use

The Civil Aeronautics Administration has accepted the Army Air Forces offer of full title to the three ground controlled approach radar sets now being operated by the CAA on loan from the AAF at New York (LaGuardia Field), Washington and Chicago.

The loan originally was scheduled to terminate June 30, at which time CAA was supposed to purchase or return the sets. The CAA requested appropriations for the purchase of these 3 sets, and of 20 additional, but was given funds for purchase of only 2 sets.

In order to make it possible for the three existing safety aids to continue, the AAF is giving the sets to CAA outright, together with an estimated 6 months' supply of parts.

As a further step toward full utilization of available funds for air safety, it has been agreed that CAA and the AAF will explore the possibility of joint procurement of improved GCA sets to be ordered by both agencies about January 1948. It is hoped that in this way the CAA, with funds to purchase only two sets, can obtain the savings of mass production while specifying modifications which it may require for civil use.

Milton Arnold, vice president of the Air Transport Association, who participated in the meeting which

(*See page 89*)

Communicators Jobs Available in Alaska

The Civil Aeronautics Administration has openings for 200 qualified single men as aircraft communicators in Alaska, at starting salaries of $3,306 a year.

Successful applicants will be assigned to the 45 airways communications stations operated by the CAA in Alaska for the safety of civil and military flying.

The men selected will be in line for eventual promotion to higher grade jobs paying up to $5,656 a year. Additional earnings are possible in all grades through authorized overtime beyond the 40-hour week, and through the 10 percent night differential.

Job Qualifications.—Basic qualifications for the jobs are the ability to transmit and receive International Morse Code at minimum speed of 30 words a minute; to touch-typewrite at 35 words a minute; and 18 months of aeronautical communications experience or an acceptable equivalent in education and experience.

Applicants other than veterans must be between 18 and 40, and in good health, particularly with regard to hearing, vision, and speech.

To apply, Form 57 should be sent to the CAA Aeronautical Center, P. O. Box 1082, Oklahoma City 1, Okla. This is the standard form for Federal employment and may be obtained at most post offices.

Will Receive Tests.—If the applicant appears to be qualified, he will be asked to report to the nearest CAA communications station for tests. Appointments will be made on a temporary basis pending the holding of examinations by the Civil Service Commission.

Five weeks of orientation training will be given the appointees at the CAA Aeronautical Center in Oklahoma before they are sent to an Alaskan post. They will be expected to remain in Government service in Alaska for at least 12 months following their appointment.

South America's Top Air Officials Visit U. S. to Study Aviation Methods

Top men in aviation in the other Americas are coming to the United States to study both the governmental and private phases of our aviation industry.

At the same time, the Sixth Inter-American Aviation Training Program through which young men are trained in CAA airways methods and procedures, is continuing, making two distinct but related programs now under way.

Twofold Program.—The aviation leader's program, under the auspices of the CAA International Activities Service, affords opportunity for governmental civil aviation administrators and executives of air lines flying the flags of their respective countries to become familiar with methods and regulations of control of civil aviation in the United States. The Foreign Nationals Training Division of CAA directs the training program for airways operators and maintenance technicians.

Evidence of the close relationship which the two programs bear to each other is shown by the fact that Señor German Pol of Bolivia, who received instructions as a mechanic in the first Inter-American Program in 1942, is coming back as director of Bolivian national aviation. Pilots, mechanics, and engineers were trained in earlier programs, but current activity is confined to airways operations.

First of the administrators to arrive was Señor Gregorio Bisquertt, Chilean national director of aviation, who reached Washington June 19. His visit will be arranged by Theodore C. Uebel, CAA liaison officer.

Studying CAA and CAB.—While in the United States, Señor Bisquertt will devote most of his time to a study of the duties and procedures of the Civil Aeronautics Administration and the Civil Aeronautics Board, with the view of establishing an agency, combining the functions of both, which he will head.

In addition, the Chilean delegation will include Juan del Villar, executive vice president of LAN, Chilean National Airline, now in U. S.; General Augustin Inastroza, chief surgeon of the Chilean Air Force, and Raul Alamos, chief engineer of LAN, expected within the next few weeks.

Air-line management and operations will be studied by Señor del Villar; General Inastroza will devote his attention to medical procedure and practices of the CAA, Army, Navy, and Public Health. Señor Alamos will devote most of his stay in the United States to studying air-line operations and visiting the plants of airplane manufacturers.

Other countries which will send top ranking air officials are Argentina, Bolivia, Colombia, Ecuador, Mexico, Peru, and Uruguay.

Aviation training for citizens of American Republics was established by the CAA in response to request of the countries in 1942, and 971 representatives of 20 Western Hemisphere republics already have attended the CAA sponsored schools.

Trainees in Sixth Program.—The sixth program, now under way, includes 22 from Latin American countries. They are receiving instruction at the CAA Training Center, Oklahoma City. Academic instruction for the trainees is supplied by the University of Oklahoma City.

Fifty Philippine citizens are also receiving training in airway communication, air-traffic control and airways maintenance under the direction of the Foreign Nationals Training Division. This training is financed from the Philippine rehabilitation appropriation.

The Philippine trainees arrived 2 days after their ship docked, June 6, at Oakland, Calif. Members of the faculty who welcomed them were astonished at the trainees' complete mastery of colloquial English and surprised to learn that only two spoke Spanish with equal fluency. Most of them can understand the language of the conquerors of the islands, but Americanese, as it is spoken in the United States, is their preference.

While in this country during the 10-month training period, the trainees will be quartered in dormitories of the university campus, close to the Center where the technical instruction will be given. Fourteen of the Philippine students will be trained for air-traffic control, 18 in airways communication, and 18 in airways facilities and maintenance. Upon completion of their studies and training the students will return to the Philippines to take over operation of airways facilities, both for inter-island and world air traffic routes in that area.

The Latin American trainees will follow a like procedure, establishing United States methods in their native countries.

85,000 Pilots Licensed in Four-Month Period

Among the many activities that constitute the daily routine in the CAA offices, the approval of licenses to pilots is one of the most significant, as shown by the 85,000 pilot certificates issued the first 4 months of this year.

The continued interest in flying is shown clearly by the increasingly large number of student licenses issued. During the first 4 months in 1947 more than 53,000 students received licenses for flight instruction. This number compares with about 30,000 issued during the same period in 1946.

Nearly 29,000 private pilot licenses were approved in the first 4 months in 1947 as compared with 9,100 in 1946.

A sharp decline, however, was shown in the number of commercial licenses approved. The opportunity presented to pilots to obtain commercial ratings based on their war-time flying was the primary reason for the great number of commercial licenses issued last year. During the period January 1 to April 30, 1946, about 23,000 pilots received a commercial rating. This year only 1,932 have been issued.

Monthly figures of pilot certificates issued during the first 4 months in 1946 and 1947 are shown in the following table:

Certificates	1947					1946				
	January	February	March	April	Total	January	February	March	April	Total
Student	*11,200	12,881	14,436	15,264	53,781	4,945	5,483	7,349	12,599	30,376
Private	7,433	6,692	7,671	7,090	28,886	2,039	1,900	2,070	3,105	9,114
Commercial	385	433	482	632	1,932	8,382	4,938	4,637	5,029	22,986
Airline	1	181	82	157	421	na	na	na	na	na
Total	19,019	20,187	22,671	23,143	85,020	15,366	12,321	14,056	20,733	62,476

na—not available. *Estimated.

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DEPARTMENT OF COMMERCE
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T. P. Wright, *Administrator*
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Three CAA Officials Shifted to New Posts

Three shifts have been made in top Civil Aeronautics Administration jobs.

William M. Robertson, Assistant Administrator for Foreign Operations, leaves Washington to return to his former post as Regional Administrator in Atlanta, supervising all CAA operations in the Southeastern States.

Foreign Work Transferred.—No successor will be named, since in the interests of economy the functions of the Office of Foreign Operations are being transferred to other offices of CAA on a reduced scale. The foreign field offices, which are staffed with air carrier inspection personnel, will come under the Office of Safety Regulation. The International Activities Service, which has handled such projects as the simplification of international air travel requirements and arranging for aeronautical missions to and from the United States, will discharge those duties with fewer personnel under the Administrator, reporting through the Plans and Performance Staff.

Lanter To Head Center.—Fred M. Lanter moves from the Regional Administrator position in Atlanta to Oklahoma City, where he will direct the CAA Aeronautical Center, national headquarters for training of CAA personnel. He succeeds Bennett Griffin, whose appointment as Administrator of Washington National Airport was announced earlier.

F. W. Devlin, Program Planning Officer, becomes Executive Assistant to Mr. Wright, succeeding F. B. Lee, recently named Deputy Administrator.

Mr. Devlin came to the CAA in February 1946 from Consolidated-Vultee Aircraft Co., having served with aircraft manufacturers in engineering and administrative capacities since 1925, when he received his M. S. from Columbia University. He was raised in Freeport, N. Y.

Mr. Robertson joined the predecessor agency of CAA in 1929, serving as an aeronautical inspector at Cleveland until 1939, when he went to Atlanta as Chief of the General Inspection Branch. He held progressively higher posts there until called to Washington in September 1946. Mr. Robertson is a native of De Soto, Mo., and an Air Corps veteran of World War I.

Mr. Lanter also came to CAA in 1929 as an aeronautical inspector, with Atlanta his station. He became Director of Safety Regulation at Washington in October 1942, performing those duties until he went to Atlanta in September of last year. Born in Portland, Ind., Mr. Lanter served in the Aviation Section of the Signal Corps during World War I.

High School Students Get Airplane Flights In Aviation Courses

Flight experience during the last school season totaling 5,451 hours for 1,594 students and teachers of California high schools is an example of the rapid growth of aviation interest in secondary schools.

Twenty-eight States now have complete aviation education programs under way, and 12 States are working on such programs with the assistance of CAA aviation education consultants.

Get Flight Experience.—As in California, several States have included actual flight experience in their courses, which integrate aviation subjects into the usual school curriculum. Flight experience is not flight instruction, but consists of flights to familiarize the student and the teacher with the airplane. For 90 percent of the 1,594 getting such experience in California, it was their first airplane ride. Parents have joined their children in the flight experience in many cases, and several families have purchased airplanes, largely as a result of the interest aroused in the students. Only four parents in the State refused their children permission to fly.

For next year, funds have been provided in California's educational system to give flight experience to 5,000 or 6,000 students. Last year's State-wide program of aviation education, including the flight experience, cost $200,000.

Cooperation with CAA in assisting States to integrate aviation subjects into all grades of public schools has been given by many civic-minded organizations, and by the Civil Air Patrol and the Air Forces. Planes for indoctrination flights have been rented to the schools at the rather low rate of $5 an hour by interested airport and flight school operators and Civil Air Patrol members who are aircraft owners.

Summer Courses for Teachers.—During 1942 and 1943 the CAA gave special training to 7,000 teachers over the country, and this summer aviation education institutes are being held in 38 States at 80 different educational institutions, with CAA consultants assisting State education officials. Many of these courses also involve actual flight experience.

States in which these courses are being given at various times throughout the summer are: Washington, Montana, Idaho, Oregon, Utah, California, and Arizona; Missouri, Kansas, Wyoming, South Dakota, and Colorado; Arkansas, Texas, New Mexico, Oklahoma, and Louisiana; Minnesota, North Dakota, Ohio, Michigan, Wisconsin, Illinois, Indiana, and Kentucky; North Carolina, South Carolina, Georgia, and Tennessee; New Hampshire, Vermont, Massachusetts, Rhode Island, Maine, Pennsylvania, Connecticut, New York, and New Jersey.

Also during this summer, some 40 "operations institutes" are being conducted by the CAA for teachers and supervisors of school systems. These institutes give the teachers a quick 1-day course in airport operations, air-line operations and the various Government services provided to flyers. Programs usually end with a flight and in a recent institute held in Kansas, 160 of the 180 teachers attending had never flown before. In all, more than 150 such institutes have been conducted.

Dispenses with Renewals

Private and commercial pilot certificates are good indefinitely under a new CAB ruling, which changes the two-year renewal requirement in Part 20. The two-year duration still applies to student pilot certificates, however.

Civil Aviation Highlights

Airports in operation, July 1	5,251
By type:	
Commercial	2,512
Municipal	1,672
CAA intermediate	185
Military	599
All others	283
By class:	
Class I and under	3,160
Class II	828
Class III	512
Class IV and over	751
Total registered aircraft, July 1	93,920
Scheduled air carrier aircraft, July 1	902
Civil aircraft production, May	1,646
2-place models	847
3- and 4-place models	771
Over 4-place models	28
Washington National Airport Operations, June:	
Scheduled air carrier:	
Passengers departing	51,653
Passengers arriving	46,297
Aircraft arrivals and departures	9,809
Aircraft arrivals and departures other than scheduled air carrier	5,504
San Francisco Municipal Airport operations, May:	
Scheduled air carrier:	
Passengers departing	41,278
Passengers arriving	38,744
Aircraft arrivals and departures	5,814
Aircraft arrivals and departures other than scheduled air carrier	9,390
Air traffic activity:	
Aircraft operations handled by airport control towers (in thousands):	
May 1947	1,707
May 1946	1,010
Fixed postings handled by airway control centers (in thousands):	
May 1947	878
May 1946	786

CAA Aids States in Training Local Officials for Safety Role

North Dakota and Louisiana are the latest States to hold training schools for State and city officials as part of a cooperative program with the Civil Aeronautics Administration to promote safe and "good-neighborly" flying.

The North Dakota school was held July 24–25 in Bismarck, while the Louisiana session took place early in August. An enforcement school is slated to be held in Wisconsin later this summer.

The courses are given to guide local officials in using the police power to curb flying which constitutes a hazard or nuisance to their communities, and also to inform them on the role of the CAA, which continues to be the sole agency for licensing aircraft and airmen and for enforcing the Civil Air Regulations.

In Oregon, a seminar in aviation law enforcement was held at Klamath Falls on July 15.

Local enforcement under the California Air Navigation Act was discussed with approximately 300 chiefs of police at meetings in Watsonville and Fowler.

Ohio officials, including the State director of aviation, State highway patrol officers, and others met at Bowling Green for 2 days in June to confer with CAA officials on enforcement of safe flying practices.

A training program previously held in Arkansas is reported to be showing good effects—the mere knowledge that the State police were prepared to act serving to prevent careless and reckless operation of aircraft.

Air Tourists to Mexico Cleared at Brownsville

Air tourists planning a trip into Mexico can now get their clearance papers on this side of the border at Brownsville.

This significant step in simplifying international air travel has been taken with the stationing of Mexican customs and immigration personnel at Rio Grande Valley International Airport, Brownsville, Tex.

A building at the airport has been renovated for their use, and a flag-raising ceremony was scheduled for July 27. The Governor of Texas and the Governor of Tamaulipas, Mexico, were among the notables invited to attend the dedication of the building.

Under the new arrangement, tourist flight clearances can be made in approximately 20 minutes at Brownsville. The tourist will then be able to land anywhere in Mexico without further clearance. Previously, the tourist had to fly to Mexico and pass through customs and immigration there, with no assurance before undertaking the flight that he could enter the country without difficulty.

The Brownsville experiment will be watched closely as a guide to the possibility of stationing United States customs and immigration personnel in Mexican and other foreign points of origin for air traffic. It may also result in the assignment of Mexican inspectors to other United States border points commonly used for flights into Mexico.

The step taken at Brownsville is in line with recommendations of the survey group of United States Government and aviation industry officials, headed by Harry G. Tarrington of the CAA, which visited Brownsville earlier this year during a 20,000-mile tour aimed at making international air travel easier. Follow-up work was carried on intensively by a local Government-industry committee in Brownsville, of which CAA Inspector Leslie Hables was a member.

Large Cuts in Plane Output Shown by May Shipments

Civil plane production in May, with a total of 1,646, was 20 percent less than the April output, and little more than half the output of a year ago. Total production in April was 2,038, and in May 1946 it was 3,073.

Although production dropped for all classes of civil planes, the two-place plane took the lead over the family-size plane for the first time this year. Two-place planes totaled 847, and three- and four-place planes, 771.

The May 1947 civil plane shipments follow:

	May	*April*
Total	1,646	2,038
By number of places:		
2-place	847	964
3- and 4-place	771	1,042
Over 4-place	28	32
By number of engines:		
Single engine	1,618	2,006
Multi-engine	28	32
By total rated horsepower (all engines):		
1-74 horsepower	226	338
75-99 horsepower	613	621
100-399 horsepower	777	1,046
Over 399 horsepower	30	33

May employment at plants manufacturing complete aircraft was 147,270, a decrease of nearly 8,000 from the preceding month. Exports totaled 327 aircraft valued at 9.4 million dollars, compared with 296 valued at 5.5 million dollars in April.

Foster Named to ACC

The new Department of Commerce representative on the Air Coordinating Committee will be William C. Foster, Under Secretary of Commerce. He replaces William A. M. Burden, former Assistant Secretary of Commerce. T. P. Wright, Administrator of Civil Aeronautics, will continue as alternate.

CAA Proposes 250 Seaplane Bases To Further Water Flying in U. S.

With the building of approximately 250 major seaplane bases throughout the United States proposed by the Civil Aeronautics Administration, water flying appears destined for an important place in light-plane aviation, Theodore M. Wayave, Chief of the CAA Seaplane Facilities Section, told members of the Aviation Writers Association recently.

Addressing a meeting of the New York Region of AWA, Wayave revealed the CAA goal is for seaplane bases to be located so that at least one major facility will be available to cross-country seaplane pilots approximately every 125 miles. Each such facility would, at the same time, serve local flying within a radius of 65 miles.

Seaplane Facilities Lacking.—"Such a program is aimed at elimination of the biggest stumbling block to the growth of seaplane flying," Wayave explained. "Now, except for certain highly developed regions of the country such as the Atlantic coast, seaplane pilots have few places to go where they can obtain adequate service. Of course, you can land a seaplane in any suitable body of water—and there are literally thousands of them—but the main difficulty is in getting adequate service and anchorage facilities once you are on the water. We believe that private enterprise will provide many of these services and facilities. With those, and others which will be provided through Federal-aid to local communities, it will be entirely practical to fly a seaplane anywhere in the United States."

The Federal Airport Act provides for federal assistance in development of seaplane bases and calls for 50–50 sharing of costs by the Federal Government and the local public sponsor, usually a municipality.

"We believe that 250 bases could be provided for a combined expenditure of about $2,500,000—an average of $10,000 per base," Wayave said.

Since many seaplane bases now operating were established at a fraction of that expenditure, Wayave pointed out that Federal-aid could result in the establishment of major ramp, dock, service, fueling, and parking facilities.

Tulsa Plans Lagoon.—In many localities not situated on suitable water, plans have been proposed for construction of artificial lagoons. In Tulsa, for instance, the Arkansas River's rapid current with floating debris and extreme rise and fall precludes safe seaplane operations. But development of a lagoon 400 feet wide and 4,500 feet long in lowland only a 10-minute drive from the heart of the city is believed to be practical.

The proposed Tulsa seaplane lagoon, typical of others under consideration in the country, could be constructed simply by bulldozing out a channel about 3 feet deep. Pumps and control level floats would keep the water level in the lagoon constant. The land thus removed could be used to form a parallel landing strip for wheel-equipped planes.

Similar amphibious facilities could be installed in many of the existing airports, Wayave explained, by dredging a lagoon parallel to existing runways. In many cases natural seepage will fill the lagoon and pumps will be used only to maintain the water level.

The program should take advantage of the many water areas or lakes formed by flood control, navigation, power and conservation dams constructed throughout the country by various Federal and State agencies. Under policies announced by these various agencies, development of recreational facilities in such reservoir areas is called for, and development of seaplane-base sites and water-landing areas can be undertaken either by public or private interests.

Public Sites Offered.—Thus, the program envisages seaplane bases on leased Federal or State reservoir land, tied in with parks, picnic and camping grounds, and resort hotel facilities to be erected in those areas by private interests with full Government encouragement. Wayave pointed out that, in an effort to obtain utmost use of federally owned terrain around the reservoir areas, the Government and State agencies will lease acreage at extremely low rates.

The CAA, in addition to pushing ahead with the drafting of standards for new bases, is carrying on a program for complete use of existing facilities, Wayave said. For instance, a transcontinental survey of present seaplane bases is to be undertaken, with the aim of obtaining the fullest possible data on available facilities for the cross-country water flyer.

The seaplane-base data formerly contained in the Airman's Guide has now been published separately in a new booklet, Seaplane Base Directory. The first issue appears as volume 1 No. 1, dated July 1, 1947.

Wayave, a long-time pilot and for years operator of seaplane services in the island-dotted southeastern section of Alaska, as well as in the eastern United States, has been using his own new Luscombe 8E personal type plane on Edo floats for survey trips. He has flown nearly 200 hours this summer in the South and East, contacting local authorities and private interests, advising them on suitable seaplane base sites and facilities. He plans similar trips to the Midwest, the far west, and Alaska this year.

Aircraft Engine Output in May Down in Number; Up in Value

Aircraft engine manufacturers reported shipments valued at 31.1 million dollars during May, representing a total of 2,160 engines and parts. Comparable April shipments were larger in number (2,902) but less in value (29.7 million dollars).

Aircraft engine shipments for the first 5 months of this year were:

	Number	*Value*
January	2,862	$27,513,272
February	2,126	23,888,621
March	2,895	27,321,056
April	2,902	29,722,179
May	2,160	31,116,497
Total	12,945	$139,561,625

Total employment at plants building aircraft engines dropped to 34,289 during May—a decline of 4 percent from the previous month. Exports totaled 849 engines valued at $2,499,148, with both number and value being more than twice the previous month's figures. At the end of the month, the total aircraft engine backlog scheduled for completion in the next 6 months, stood at $176,200,000.

Expired Pilots' Certificates Exchangeable for New Type

Many private and commercial pilots failed to exchange their old-type pilot certificates for the new type required after July 1. Those whose certificates have expired on this account, may still make the exchange simply by applying to the CAA. Examinations and flight tests are not involved in the transaction, since one form is replacing another.

The pilot now gets a general pilot's certificate with his ratings, such as private or commercial, attached on a separate form so that he does not have to get a new certificate every time he changes his rating.

Pilots who received their certificates between January 1, 1942, and July 1, 1945, are required to make the exchange. July 1 of this year was the deadline.

International Traffic Reached New Peak In April Operations

For the second successive month, international American flag carriers expanded their passenger and express traffic to new record-breaking levels in April.

Revenue passenger miles flown in April hit an all-time high of 126,519,000, a 5 percent gain over the former peak figure of 120,352,000 established the previous month, and 59 percent above the 79,682,000 recorded in April 1946.

Total revenue passenger-miles flown during the first 4 months of 1947 amounted to 453,708,000 versus 261,248,519 during the corresponding period in 1946, an increase of 74 percent. This compares with an increase of 15 percent in revenue passenger-miles flown by domestic scheduled air lines during the same period.

Major Share to Pan Am.—Pan American Airways maintained its position as the largest American flag carrier. Altogether its divisions flew more than 81 million revenue passenger-miles—almost two-thirds of the total. TWA was second with 16,040,000 and American Overseas Airlines third with 11,121,000.

Despite the record-breaking traffic, the revenue passenger load factor for international carriers declined to 58.4 percent in April. This was only slightly above the postwar low of 56.4 percent recorded in January 1947, and was 26 percent below the 79.1 percent hung up in April 1946. Trans-Atlantic load factors were on the increase with an average of 73.3 percent, but Trans-Pacific and Alaskan, and Caribbean and Latin American sagged to 60.5 and 49.7 percent, respectively.

Chiefly responsible for the declining load factor during the past year was the addition of more frequent schedules and larger equipment. The smaller DC–3's were gradually being retired from service while the number of DC–4's and Constellations in operation more than tripled. Thus, while revenue passenger-miles increased 59 percent between April 1946 and April 1947, available seat-miles flown jumped 115 percent during the same period.

More Express Hauled.—Total express carried in April also broke all previous records when 2,432,249 ton-miles were hauled, 5 percent more than March's 2,321,514. Freight ton-miles, however, declined slightly to 142,150 from March's record-breaking 146,782.

Total cargo carried during the first 4 months of 1947 was over twice the amount transported during the same period in 1946 (8,093,325 versus 3,935,047 ton-miles).

Regional distribution of international passenger and cargo traffic during April was as follows:

Region	Revenue passenger miles		Express and freight	
	(000)	Percent	Ton-miles	Percent
Carribbean and Latin American	60,508	48	1,665,976	65
Trans-Atlantic	49,449	39	644,587	25
Trans-Pacific and Alaska	16,562	13	263,836	10
Total	126,519	100	2,574,399	100

Notwithstanding their rapid expansion, international air carrier operations remain but a fraction of domestic scheduled air traffic. Only in the field of air express do the international carriers approach the volume of the domestic air lines.

Kept Radio Range Station Open During Kansas City Floods

Working day and night in water up to their waists, CAA personnel arranged a temporary hook-up to return the Kansas City radio range station to usable condition after the recent floods in that section of the country put the range out of commission. A 300-watt transmitter was installed above the water level in the flooded transmitter building, and connected with the center tower of the range. A flight check of this improvised set-up showed that pilots would be able to pick up the signals at all the points where they normally tune into the Kansas City range, and that instrument traffic could proceed as usual.

An attempt was first made to use the compass locator station at the outer marker site of the instrument landing system as a homing station. This proved impractical, since it was impossible to read the station more than 5 miles under static conditions.

National Defense Interests Prompt Plane Industry Study

To provide a long-range basis for sound national defense policies in aircraft production, an intensive technical study of the aircraft manufacturing industry has been launched by Stanford University Research Institute under the direction of the Air Coordinating Committee, Secretary of State Garrison Norton, Chairman of the ACC, has announced.

Mr. Norton stated that, on the basis of the technical findings to be assembled by the Stanford study, plus related information on national air defense compiled by the Navy Bureau of Aeronautics and the AAF's Air Matériel Command, the ACC will submit a special report to the President on the size and type of peacetime aircraft industry which will be required in the future to meet emergency production requirements.

The committee's report, which is expected to be ready early next year, will replace an earlier report on the same subject issued in October 1945.

The new report will summarize the Nation's strategic position in terms of military vulnerability, the degree to which aircraft production will have to expand almost overnight in the event of a future attack on the United States, the types of advance industrial preparedness measures which are needed, and the volume of peacetime output which will sustain the aircraft industry at a level of activity high enough to meet national safety requirements.

The earlier report of the ACC, based on the status and outlook of the aircraft industry in late 1945, estimated that a minimum annual procurement program of from 3,000 to 5,000 military planes would be essential to protect the Nation against sudden attack through the air. The need for the new survey of the adequacy of the aircraft industry in national defense terms has been made necessary by changed strategic plans, greatly curtailed requirements for new planes on the part of nonmilitary purchasers, and failure of Government purchases to reach the peacetime levels originally set as minimum, Mr. Norton said.

GCA Sets to CAA

(*Continued from page 85*)

arranged the transfer, expressed the appreciation of the air lines for the work which had been done by the AAF and CAA in pushing the project.

With continued availability of the sets assured, CAA put GCA service on a 24-hour basis at the three locations on August 1.

Earlier this year, the AAF had offered CAA a loan of 20 additional GCA sets, but in view of the elimination by Congress of funds requested for operating them, CAA has notified the Army that it is unable to accept this offer.

May Flying Activity at 43 Airports Gains 34 Percent Over Last Year

Traffic operations (total landings and take-offs) at 43 selected airports increased 34 percent during May over a year ago. Every major flying category—military, scheduled air carrier, and other civil—was ahead.

CAA control tower operators' reports indicate that military aircraft operations were 24 percent higher than May 1946. Scheduled air carrier operations were up 15 percent. Operations by other civil aircraft (private fliers, flight schools, charter operators, nonscheduled air lines, etc.) showed the biggest advance with a 45 percent increase.

Total traffic at these 43 airports came to 722,209 operations. The scheduled air lines accounted for 175,619 operations (24%), other civil aircraft for 467,683 operations (65%), and military planes for the remaining 78,807 operations (11%).

La Guardia and Chicago Municipal were virtually tied for first place honors as the busiest terminal for air-line traffic with 11,528 and 11,203 operations, respectively. Washington National Airport held second place with 9,899 and Miami was third with 6,718.

Atlanta with 40,992, and Phoenix with 39,381, led in other civil operations.

Minneapolis was far ahead of all other airports in military operations with a total of 17,785—almost three times the number recorded there in May 1946. Cleveland registered the most marked increase in military operations—up from 973 to 6,654 (584 percent).

The comparative figures on aircraft operations for May 1946 and 1947 are shown below:

Aircraft Operations at 43 Airport Control Towers

Tower	May 1947				May 1946			
	Air carrier	Other civil	Military	Total	Air carrier	Other civil	Military	Total
Albuquerque	2,537	1,747	3,640	7,924	2,502	405	1,371	4,278
Amarillo	2,302	1,518	189	4,009	2,430	1,022	2,427	5,879
Atlanta	4,330	40,992	186	45,508	3,901	25,868	3,429	33,198
Baltimore	2,983	16,536	710	20,229	2,684	8,276	421	11,381
Birmingham	1,857	15,486	2,565	19,908	2,141	12,169	1,069	15,379
Boston	4,074	2,043	642	6,759	3,572	1,638	371	5,581
Buffalo	2,574	6,467	217	9,258	2,434	4,443	533	7,410
Burbank	2,785	5,672	2,083	10,540	6,540	2,036	260	8,836
Chicago (Mun.)	11,203	9,182	520	20,905	10,796	4,929	1,256	16,981
Cincinnati (Kenton)	3,280	7,746	18	11,044	2,325	11,094	664	14,083
Cleveland	5,126	30,941	6,654	42,721	4,501	34,236	973	39,710
Columbus	2,025	13,773	6,701	22,499	1,828	972	2,876	5,676
Dallas	5,365	4,511	53	9,929	5,227	4,164	3,782	13,173
Dayton	2,660	17,172	104	19,936	2,510	7,055	154	9,719
Denver	3,738	17,153	11	20,902	1,982	13,975	10	15,967
Detroit (Willow Run)	6,015	1,386	77	7,478				
El Paso	1,678	21,532	14	23,224	2,523	17,886	14	20,423
Fort Worth	2,845	11,095	58	13,998	3,112	9,302	159	12,573
Honolulu	3,370	6,629	1,317	11,316				
Houston	2,207	9,851	135	12,193	1,581	5,769	1,161	8,511
Indianapolis	2,824	23,131	435	26,390	2,627	11,038	500	14,165
Jacksonville	4,169	3,094	923	8,186	4,403	524	663	5,590
Kansas City, Mo	5,212	15,310	131	20,653	5,241	14,835	110	20,186
Los Angeles	6,410	5,462	1,367	13,239	712	1,040	2,616	4,368
Memphis	2,782	2,424	4,070	9,276	3,066	896	5,515	9,477
Miami	6,718	7,196	3,821	17,735	6,784	6,799	1,965	15,548
Minneapolis	2,958	14,136	17,785	34,879	2,528	8,103	6,670	17,301
Nashville	3,101	2,360	1,882	7,343	2,864	1,421	1,828	6,113
Newark	4,181	2,203	3,470	9,854	3,777	2,566	3,015	9,358
New Orleans	2,314	665	154	3,133	2,133	436	78	2,647
New York (LaGuardia)	11,528	2,191	69	13,788	12,300	4,511	675	17,486
Oakland	2,999	11,093	5,298	19,390	2,459	3,462	5,760	11,681
Omaha	2,467	19,265	97	21,829	2,646	10,242	51	12,939
Phoenix	2,694	39,381	102	42,177	2,839	29,300	601	32,740
Philadelphia	5,225	1,911	175	7,311	3,454	976	171	4,601
Pittsburgh	6,242	8,930	55	15,227	5,334	3,613	139	9,086
Portland	2,801	1,820	1,464	6,085	2,294	235	862	3,391
St. Louis	4,417	15,689	6,066	26,172	4,226	16,876	4,658	25,760
San Francisco	5,814	8,788	602	15,204	4,683	4,273	861	9,817
Seattle	3,066	16,122	178	19,366	1,990	19,202	1,138	22,330
Tulsa	2,325	6,664	2,327	11,316	1,768	8,469	1,026	11,263
Washington, D. C.	9,899	4,227	1,429	15,555	9,295	4,004	3,531	16,830
Wichita	2,519	14,189	1,113	17,821	2,602	3,653	493	6,748
Total	175,619	467,683	78,907	722,209	152,614	321,713	63,856	538,183
Percent of total	24	65	11	100	28	60	12	100

Army Pilot Uses Atlanta ILS to Make Zero-Zero Landing

Using the CAA instrument landing system at Atlanta, Ga., Army Pilot Pete H. Young made a landing in such murky weather that Atlanta tower could not see him until he taxied up to the administration building.

The ceiling and visibility were zero when Pilot Young, using the vertical needle on the cross-pointer indicator in his plane to find the runway center, made a successful landing on the airport at 3 a. m. on June 26.

Flying an Army C-47, he called from Knoxville, Tenn., for weather conditions at Atlanta, and was advised by CAA air traffic control that ceiling was 300 feet and rapidly closing in. He called back to see if ILS was working, and upon being informed that it was, he obtained clearance through ATC and Army flight service.

When he came over the field, the weather had "gone down." After checking on ILS again and finding that it registered normally, he started his landing.

The landing was made without the glide path, since the plane was not equipped with the glide path receiver. He, therefore, used the runway localizer marking the runway center, and the ILS markers located at intervals along the approach path to indicate distance from the runway, Pilot Young said that he experienced no difficulty in landing.

The CAA second region reports that pilots from the Marietta Army Air Base have been practicing daily on the Atlanta instrument landing system.

The Atlanta ILS is 1 of 50 systems now in operation at various airports for use in bad weather landings, and others are in the process of being commissioned. When the 1947 program is completed the CAA expects to have from 90 to 100 instrument landing systems installed.

Crashes on WAL Mail Run.—While on his second trip of the mail run he was operating for Western Air Lines between Rapid City and Spearfish, S. Dak., Pilot J. R. Ice, 30, stalled during a landing approach to the Rapid City Airport and crashed. Both he and his wife, who was a passenger, were killed, and the plane was destroyed.

His experience in the type of plane involved appears to have been limited to about 3 hours, the CAB reports. This time consisted of a 40-minute round trip between Rapid City and Spearfish with a check pilot, 1 hour of solo familiarization and two scheduled round trips between the two places. The crash occurred during the landing approach of the return leg of the second round trip.

Ice contacted the Rapid City control tower and was given landing instructions. While turning into the downwind leg of the traffic pattern he stalled at an altitude of about 500 feet and the aircraft crashed approximately one-half mile south of the airport.

Investigaton revealed no plane trouble. There was ample fuel. Weather was good and the trip, which required only 20 minutes, had been made on a contact flight plan. The aircraft was loaded within acceptable limits. It was further revealed that a metal mail container had been removed from the aircraft on the day of or prior to the accident, apparently to accommodate the passenger. However, some United States mail was aboard the plane. All of it was recovered and placed in proper custody.

The pilot's flying history covered a period of about 7 years. Currently he was employed by Western Air Lines as a reserve captain which position he had held for approximately 1 year. For the three previous years he had been employed by the same company as a first officer. He held an Air Transport pilot certificate endorsed with single engine, flight instructor and instrument ratings. It appears that Ice had requested this particular run of his employers.

Western Air Lines was certificated to operate day contact flights over this route with mail and cargo only.

Continued Trip in Rainstorm.—A cross-country flight, continued in a heavy rain storm when the aircraft was not equipped and the pilot was not rated for instrument flight, ended in a fatal crash near Gate City, Va.

Commercial Pilot Richard A. Neff and his wife, Elsie Jean, were flying from Mount Pleasant, Mich., to Miami, Fla., and arrived in the Gate City vicinity about 11 o'clock on the morning of January 5. Witnesses heard the plane circling low directly overhead, but were unable to see it because of the low overcast and the heavy rain. At about 11:30 the plane crashed in a steep dive with power on, breaking out of the overcast less than 100 feet above the point of impact. Both Pilot Neff and his wife were killed.

Weather Bureau reports indicated that instrument weather prevailed within a 200-mile radius of the crash scene. Witnesses to the accident stated that "it had been raining all day and the fog was so deep we couldn't see the buildings on the place."

Drifted Into Power Lines.—An aircraft overloaded by 339 pounds "drifted" for 2 miles after take-off from Klamath Falls, Oreg., and collided with power lines. The pilot, John (Tex) Rankin, 54, and two of his passengers Sarles (Cy) Wallen, and John B. Elie, were killed. A third passenger, Melvin B. Thompson, was seriously injured in the crash that followed. They had planned to fly to Vancouver, Wash.

In addition to being loaded above its gross certificated weight of 3,150 pounds, the plane was taking off from an airport about 4,000 feet above sea level. With the temperature and air pressure which prevailed at the time, the equivalent altitude of the airport was approximately 4,700 feet above sea level.

Take-off with full flaps was made into a light wind and from a runway 7,200 feet long. Approximately half-way down this runway the airplane became airborne and rose abruptly to between 50 and 100 feet. The landing gear was then retracted and the plane continued ahead in a nose-high attitude, turning slightly or drifting to the right for a distance of some 2 miles during which time it gained no altitude other than the initial 50–100 feet. At this point it struck high voltage lines, plunged to the ground and was destroyed.

Such examination of the wreckage as was possible revealed no mechanical failure or malfunctioning of the aircraft or any of its components, and the engine had been run up satisfactorily prior to take-off. Flaps were down, the mixture control was found in full rich position, and the propeller in low pitch after impact.

Collide Over Airport.—Five persons were killed in an air collision at Miami, Fla., January 12, when one of the planes was preparing to land and the other had just taken off.

Pilot James W. Allen, with his wife and William R. Irwin as passengers, was flying the approaching aircraft. Pilot Muriel A. Owens and his passenger, Mrs. Viola A. Lindner, were leaving the airport.

Pilot Owens taxied to the north end of the N-S runway at Miami Aviation Center Airport and was cleared by the field attendant for take-off into a 10-mile-per-hour south wind.

Pilot Allen, on a cross-country flight from Lantana, Fla., to Miami, approached the airport from the west, cross-wind and against traffic. The field attendant gave him a red light when he was approximately 600 feet west of the airport and about 150 feet above the trees.

In the meantime Pilot Owens took off toward the south and had climbed to approximately 100 feet. Pilot Allen continued his approach and the two planes collided over the intersection of the N-S and E-W runways. Both aircraft were pulled up steeply just prior to impact.

Following collision they crashed out of control with resultant fatal injuries to all occupants.

Advised Against Trip.—After departing on a CFR flight at night from Indianapolis to Chicago despite bad weather reports, Pilot Ingvold J. Enger and his four passengers were killed in a crash near Rensselaer, Ind. The plane owned by Enger was destroyed by impact and fire.

Upon checking weather along his route prior to departure from Indianapolis about 8 p. m., Pilot Enger was told that the worst conditions would be between Lafayette and Chicago, with ceilings below 1,000 feet and visibility possibly less than 3 miles in rain showers. He was advised against attempting a CFR flight in this area.

Persons in the neighborhood of the crash stated that the night was dark and cloudy with rain showers. Distribution of the wreckage indicated that the plane was flown into the ground while the pilot was circling in an attempt to maintain visual contact. The site of the accident was 95 miles from Indianapolis on the east edge of the Chicago-Indianapolis airway and occurred about 30 minutes after departure.

Enger, certificated as a commercial pilot with single- and multi-engine land and flight instructor ratings, was reported to have flown over 5,000 hours. He did not hold an instrument rating.

Evidence disclosed by investigation indicated that the plane was airworthy and adequately fueled. Visual and radio aids to air navigation were operating normally at the time of the accident.

Collide on Picture-Taking Flight.—An air collision between two planes occurred near Tulare, Calif., March 11, while still and moving pictures were being taken from one of the planes of the aerobatics performed by the other.

Private Pilot Allen Richardson, 20, and his passenger, Robert Young, who were taking the pictures, were killed when their plane was cut in two in the collision. Neither of them had parachutes. Private Pilot Willard Rankin, 21, who was performing the aerobatics, escaped injury.

The two pilots had made arrangements for the aerial photography at an altitude of about 4,000 feet, 5 miles northwest of Tulare.

Rankin made some slow rolls which were photographed. He then flew inverted toward the south and Richardson's plane closed in right side up, from the west. Collision occurred when Richardson was blanked from Rankin's vision by his own wings. Rankin was slightly below the level of the other plane which was cut in two just aft of its trailing edge by the metal propeller of Rankin's plane. The two portions fell nearly vertically while Rankin, in full control of his plane, landed uneventfully at the Tulare Airport.

All three persons involved were students at the Tulare State College. Pilot Richardson was reported to have flown about 80 hours, and Pilot Rankin about 500 hours. Richardson's plane was owned by the Rankin Aviation Industries, and Rankin's belonged to his father's estate.

Two Killed, New Plane Destroyed.—Private Pilot William D. Bruckman and a passenger, James E. Sewell, both of Omaha, Nebr., were fatally injured when they crashed at the Luscombe Factory Airport, Garland, Tex., May 14. The plane was demolished.

No indication was found of any mechanical failure or malfunctioning of the aircraft prior to the accident. Webbing of the right hand seat belt between the buckle and left attachment to the seat failed upon impact. Wind conditions and the take-off direction used by the pilot provided a quartering right tail wind. The aircraft was loaded within approved limits.

Bruckman and Sewell accepted delivery of the new aircraft from the Luscombe factory to ferry it to the owners, Lang Flying Service, in Omaha. After the plane had been serviced, Pilot Bruckman started his take-off from the gas pump, heading in a northeasterly direction. Wind at the time was estimated as south-southwest 15 to 20 miles per hour with gentle gusts. After a prolonged take-off run the plane became airborne and climbed slowly to an altitude of approximately 150 feet. At this point a steeper angle of climb was noticed, following which the plane stalled and spun to the ground.

Failed To Make Safe Landing.—While apparently looking for a place to land, Private Pilot Leslie Halen, Jr., and his passenger, Beverly Holmes, crashed in a field near Tolland, Conn., and were killed. They were both from Littleton, N. H.

Pilot Halen and his passenger took off from the Municipal Airport at Worcester, Mass., following a cross-country flight from Northampton, Mass. Approximately 1 hour later the pilot was observed maneuvering at a low altitude about 35 miles southwest of Worcester. He approached from the north and crossed a field at from 50 to 60 feet above the ground. At the south end of this field he applied full power and pulled up over trees. He then approached another field just beyond the trees and at the approximate center of it, throttled the engine and made a 360° turn, following which the plane dived nose-first to the ground.

Pilot Halen had about 50 hours flying time.

CAB Acts on Proposals of Special Board To Prevent Plane Collisions With Mountains

(*Continued from page 85*)

this rule could be established under certain circumstances, the inquiry board stated.

Studies Take-Off Hazards.—In its first report the special inquiry board dealt with take-off problems of four-engine planes.

Closer attention to take-off loads for four-engine planes using short runways, and broader safety margins were among the recommendations made to eliminate possible take-off hazards. The inquiry board also raised the question of whether four-engine transports should be barred from runways less than 4,000 feet long, and has held a hearing on the proposal.

In regard to take-offs, the inquiry board recommended that the air lines work out uniform weight limitations, based on the present regulations, for each runway being used by four-engine planes under varying wind conditions. This work is now in progress under CAA supervision.

Stating that it is not satisfied that the present regulations allow enough runway for the airplane to stop on after it has reached critical take-off speed, the inquiry board recommended that the formula be re-examined and given flight test by the CAA, CAB, Air Transport Association, Aircraft Industries Association, and the Air Line Pilots Association.

Asks emergency measures.—In the meantime, the board urged that an additional 300 feet of runway be allowed in the load computations to give the pilot time to decide, after reaching the critical speed, whether to continue his take-off or attempt to stop. Thus, in calculating allowable gross weights for the accelerate-and-stop distances, runways will be considered 300 feet shorter than they actually are.

The inquiry board also recommended that rises in temperature be taken into consideration in computing gross loads for short runways, with 500 pounds substracted for each 10° rise in temperature over the standard point—until further study is made. This temperature correction need not be made, the inquiry board stated, where runways are more than long enough to accommodate present allowable loads.

Other recommendations included:

1. Approval by the Civil Aeronautics Administration of standard check lists prescribed by the air lines and the manufacturers.

2. Inclusion of any runway gradient in the load calculations. Only "appreciable" gradients need be considered under present regulations. (The CAB has acted on this recommendation by proposing that "appreciable" be deleted from sec. 61.7122.)

3. Provision of uniform lighted windsocks at each end of runways used by transport planes, until a study can be made of the problem of providing more accurate wind information to the pilot.

4. Further instruction for transport pilots in the use and significance of the present formula for computing allowable take-off weights. Expressing the opinion that the fullest comprehension of the formula by pilots is required to insure safety in take-offs, the inquiry board said the instruction should include a thorough discussion of the factors actually used in the formula, the kind and extent of safety margins it provides and the limitations, and the effect of variables not included in the formula, such as high temperature, heavy rain and so forth.

The inquiry board also reported that the gustlock on DC–4's is being redesigned to give further assurance that the controls cannot be inadvertently or unintentionally locked while in flight or on take-off.

Emphasizing that the recommendations for take-off are emergency measures, the inquiry board said that further studies are being made to decide if the provisions of CAR 61.7122, containing the take-off limitations for transport planes, should be revised; other interim changes made; or the present recommendations modified.

Programs in Accord.—In a report issued July 2, the inquiry board brought to the President's attention the fact that the proposed landing aid program for civil transport is coordinated with that of the armed services, and that no conflict exists between the two.

"Both safety in civil air transport and the needs of national defense have rarely been better aligned," the report stated.

Approach and landing accidents, occurring mainly during the winter months and at night, outnumber by far all other types of serious accidents, the inquiry board pointed out. In 1946 they represented 35 percent of the fatal accidents of that year, costing 85 deaths. Their reduction is not a matter of regulation but of the installation of adequate aids.

Eight Units Approved.—To keep this accident pattern from repeating itself, installation of 4 types of landing aids were planned in the CAA program for 1948: 68 approach lights; 23 ground control approach units; 25 surveillance radar systems; and 68 instrument landing systems. Of the 184 units proposed, only 8 units were approved by final congressional action. These are 2 additional approach light systems; 2 more GCA units; and 4 surveillance radar sets.

The approach lights, GCA, and surveillance radar are similar to the aids sought by the armed services, and can be used by air line, private and military pilots alike, the report stated.

While the instrument landing systems are not a part of the present Army and Navy program, except where the Army plans their installation as a secondary aid to GCA at landing areas for large bombers and transports, the board stated they are vital for civilian air transport where the demands are considerably different from those of the armed services.

The proposed program was in full accord with the program recommended by the Radio Technical Commission for Aeronautics, the special board pointed out, stating that it was impressed with the degree of coordination achieved. The commission was representative not only of the Departments of State, Treasury, War, Navy, Commerce, the Federal Communications Commission, and the Civil Aeronautics Board, but also the Air Transport Association, Air Line Pilots Association, Aircraft Owners and Pilots Association, Aeronautical Radio Inc. (a nonprofit group) and the Radio Manufacturers Association.

Use of Landing Aids.—High intensity approach lights permit pilots to make contact with the runway from heights of 200 to 500 feet, and at distances of a half mile. Landing systems can bring aircraft as close as that and closer to the ground, but lights such as these are of prime significance in making that final safe contact with the runway. Commercial pilots regard this aid of utmost importance in making landings in daytime or at night under low ceilings and in murky weather, the inquiry board found.

Ground control approach, or GCA, is the method by which pilots, through the use of ground radar, are talked into safe landings.

Surveillance radar is an installation which enables the control tower at the airport to determine with precision the direction, distance and altitude of aircraft within 20 or 30 miles of the airport.

Instrument landing systems, or ILS, are electronic devices which automatically (so far as ground control is concerned) provide the approach to airport runways and the glide path for landing.

Members of the Presidential board on air safety are James M. Landis, chairman of the group, and T. P. Wright, who also respectively head the CAB and CAA; Dr. Jerome C. Hunsaker, Chairman of the National Advisory Committee for Aeronautics; Brig. Gen. Milton W. Arnold, vice president of the Air Transport Association; and H. P. Cox, representing Air Line Pilots Association.

CAB Sets Pan Am's Rate of Mail Payment For Alaskan Service

The Civil Aeronautics Board has set Pan American Airways' mail pay at $2,572,000 for Alaskan services for the 17-month period from August 1, 1944, to December 31, 1945. The Alaskan mail rate allows Pan American a 7 percent return on its investment—the same profit established recently for trans-Atlantic operations.

This amount is equivalent to 90.36 cents a revenue plane mile flown in the carrier's Alaskan operations, and will allow an operating profit of $342,705. The mileage does not include charter service or services over the Fairbanks-Bethel nonmail route.

The CAB found that the break-even need before mail pay for Alaskan operations during the review period was $2,229,295. The $2,572,000 allowed for mail pay will yield a return of 7 percent per annum on the recognized investment of $2,111,931 after Federal income taxes are deducted at the average rate of 38.81 percent, the CAB said.

The CAB found the increase in expenses from $1.52 to $1.62 a plane mile reasonable. During this period the carrier made a change-over to use of DC-3 aircraft, and price levels have also risen.

The CAB also pointed out that although the Government now furnishes the major communications and meteorological services required by the carrier, Pan American stationed its own personnel at various radio and weather stations in Alaska to operate facilities until Government personnel became available. Before the war the carrier supplied most of its own facilities in the Alaskan sector.

The previous mail rate fixed by the CAB covered the period up to August 31, 1942, when Pan American began operations under contract with the Navy. The carrier resumed service on its own account in 1944.

Pan American conducts passenger, property and mail services over routes from Seattle to Fairbanks, and from Fairbanks to Nome.

Pioneer's Rates of Mail Pay Set for Texas Feeder Routes

The rates of mail compensation for three different periods have been set by the Civil Aeronautics Board for Pioneer Air Lines, a feeder air carrier which has been operating experimental local service in Texas since 1945.

The sum of $505,420 will be paid the carrier for mail transportation from August 1, 1945, through August 31, 1946.

For the period September 1, 1946, through May 31, 1947, the CAB set a rate of 60 cents an airplane mile to be paid the carrier without reference to a base poundage of mail. During this period the carrier's route mileage was increased from 2,732 to 8,150 miles. The carrier also converted from the use of Electra's to the larger DC-3 aircraft.

After June 1, 1947, a sliding-scale arrangement will govern the rate of mail pay, with a base rate of 45 cents an airplane mile to be paid as long as the average passenger load is not more than 35.99 percent—equivalent to an average of seven passengers.

Under the sliding-scale form of payment, the mail rate will decrease as the average passenger load factor increases, with the result that net revenues to the carrier will increase with any increase over 35.99 percent in the average passenger load factor.

The cargo loads do not enter into the rate computations, and any revenue derived from this source will accrue entirely to the benefit of the carrier, the CAB said.

The mail compensation derived by the application of the new rates will be inclusive of and not in addition to the mail compensation already paid the carrier for mail transportation from August 1945.

Airline Orders

E-649 permits Northeast to begin nonstop service between Hyannis and New Bedford–Fall River, Mass., on June 27 (June 23).

E-650 orders the Empresa de Transportes Aerovias Brasil, S. A., proceeding (docket 2868) to be certified to the Board for initial decision (June 24).

E-651 denies Chicago and Southern's petition for reconsideration of the Braniff and C. & S. consolidation decision, order E-395 (June 24).

E-652 allows Challenger Airlines to continue suspension of service to Greeley, Colo., until July 24, and to Fort Collins, Colo., until suitable airport is available (June 24).

E-653 orders investigation of tariff rules filed by 17 U. S. and foreign carriers providing free or reduced rate transportation for group travel, tour conductors, travel agents, employees, officials and directors of other carriers, and other persons (June 25).

E-654 orders investigation of international passenger tariffs filed for National Airlines providing free or reduced rates for travel agents and tour conductors (June 25).

E-655 dismisses upon request of All American Aviation, application for service, docket 2588 (June 25).

E-656 amends order E-408, fixing Colonial's temporary mail rate by basing the 20 cents a plane-mile rate on mileage scheduled by the airline rather than mileage designated by the post office for carrying mail (June 25).

E-657 accedes to request of Hughes Tool Co. and TWA for separate hearing on certain transactions the Board has ordered investigated to settle the acquisition of control question; denies motion in other respects (June 18).

E-658 allows Pan American to continue service to Camaguey, Cuba, until Board decides whether Camaguey is to replace Cienfuegos as a regularly certificated stop on carrier's Miami-Jamaica route (June 25).

E-659 permits Royal Dutch Air Lines (KLM) to begin service immediately to New York City and Miami (June 25).

E-660 permits Colonial Airlines to begin nonstop service between Washington, D. C., and Scranton-Wilkes-Barre, Pa., on July 1 (June 25).

E-661 permits Colonial to begin nonstop service between Syracuse, N. Y., and Ottawa, Canada, on July 1 (June 26).

E-662 denies Colonial's petition for reconsideration of its application for service between eastern United States cities and the Canal Zone following the supplemental opinion recently issued on the Latin American case (June 26).

E-663 permits Trans-Canada Air Lines to begin service to Sault Ste. Marie, Mich., on July 1 (June 27).

E-664 approves agreements between Western and 16 surface carriers relating to pick-up and delivery service within terminal areas (June 27).

E-665 approves agreements between Inland and 12 surface carriers relating to pick-up and delivery service (June 27).

E-666 denies petition of Air Commuting for deferment of consideration, instead of denial, of its application for service between the East River seaplane bases and New York City airports, and also between airports in the New York City area (June 27).

E-667 approves agreement between American Airlines and United Air Lines relating to DC-6 aircraft schedules (June 30).

E-668 allows John Gaynor Walsh to hold offices in the Railway Express Agency and three other companies (June 30).

E-669 allows Armand T. Mercier to hold offices in the Railway Express Agency and also to hold positions in 10 other companies (June 30).

E-670 rescinds order suspending Empire Air Lines' service to Pullman, Washington-Moscow, Idaho (June 30).

E-671 allows Postmaster General to intervene in the Reeve Airways proceeding (July 1).

E-672 denies petition of Asheville, N. C., for leave to intervene in the Middle Atlantic case (July 2).

E-673 suggests a higher temporary rate of mail pay for Northwest's trans-Pacific routes than the rate fixed January 23, upon finding the carrier needs more mail pay. Suggested rate for Minneapolis, Seattle, and Anchorage services is 59 cents a plane-mile based on 5,100 miles. Proposed rate for services between Anchorage, the Kurile Islands, Japan, Korea, Asia, and the Philippines is $1.75 a plane-mile based on 5,700 miles (July 2).

E-674 advises Monarch Air Lines that suspension of service at Gallup, N. Mex., is no longer required (July 2).

E-675 approves agreement between Northeast and Pennsylvania Central relating to engine and parts overhaul work at Boston (July 2).

E-676 fixes Pioneer Air Lines' mail pay at $505,420 from August 1, 1945, through August 31, 1946; sets a rate of 60 cents a plane-mile without reference to mail poundage from September 1, 1946, through May 31, 1947; and from June 1, 1947, sets the rate at 45 cents a plane-mile to be paid when the average passenger load does not exceed 35.99 percent—issued with opinion (July 2).

E-677 permits Pan American to conduct nonstop flights between Wake Island and Tokyo, and between Shanghai, China, and points south of Hong Kong until Board's decision on amendments to carrier's trans-Pacific service; defers consideration on Shanghai-Manila nonstop service (July 7).

E-678 denies petition of Columbus, Ga., Chamber of Commerce for leave to intervene in the Boston-New York-Atlanta-New Orleans case (July 7).

E-679 permits Alaska Airlines to intervene in the Frank M. Coplin proceeding—docket 2903 (July 7).

E-680 dismisses application of Philip P. MacDonald upon his request (July 7).

E-681 allows Clovis, N. Mex.; the Clovis Chamber of Commerce; and the Eastern New Mexico Chamber of Commerce to intervene in the Arizona-New Mexico case (July 7).

E-682 allows Pioneer Air Lines to intervene in the Arizona-New Mexico case (July 8).

E-683 grants Board of Commissioners, Montgomery, Ala., leave to intervene in the Boston-New York-Atlanta-New Orleans case (July 8).

E-684 awards Pan American Airways the sum of $2,572,000 for mail transportation in Alaskan operations from August 1, 1944, to December 31, 1945—issued with opinion (July 9).

E-685 allows Monarch Air Lines to begin service to Gunnison, Colo., on July 15 through use of Gunnison Municipal Airport (July 10).

E-686 combines the applications of 10 air carriers for service in the California-Nevada area into one proceeding, docket 2019. The applicants include Transairways; Julius E. Nervo; Pacific Air Lines; Pacific Air Transport; Bonanza Air Lines; Southwest Airways Co.; Arizona Airways; Las Vegas, Nev.; TWA and United (July 11).

E-687 permits Western to intervene in the California-Nevada case (July 11).

E-688 dismisses cases of six applicants for service in the California area since none of them appeared at a prehearing conference, or have indicated otherwise their intentions of prosecuting their applications. They include Airdrome Transport; Zenith Airlines Co.; Edgar T. Worthen; Ernest Long; James Walker Case; and Golden State Airlines (July 11).

E-689 approves interlocking relationships resulting from the position held by Paul M. Davis in Eastern Air Lines, Southern Bell Telephone & Telegraph Co., and Southern Coach Lines (July 10).

E-690 dismisses application for certificate of Nevada Airways upon request of applicant (July 14).

E-691 dismisses Pan American exemption proceeding, docket 2847, upon applicant's request (July 14).

E-692 approves holding by Harvey McKinley Johnson of any office in the Railway Express Agency while holding offices in any of 34 other transportation companies (July 16).

E-693 orders separate consideration of the interlocking relationships arising from positions held by Harvey McKinley Johnson in Railway Express Agency and Eagle Airlines (July 16).

E-694 dismisses interlocking-relationship proceeding involving Albert L. Zimmerly, Gwin Hicks, and Empire Airlines (July 16).

E-695 approves agreement between PCA and Royal Dutch Airlines relating to temporary arrangements for interline ticketing (July 16).

E-696 allows Monarch Air Lines to serve Canon City, Colo., as a temporary intermediate point on its route 4 segment from Grand Junction to Denver and to suspend service to this city on segment 5. Carrier is also exempted from service to Leadville and Salida on segment 4 since suitable airports are not available (July 9).

E-697 approves agreement between United, TWA, and American relating to the enlargement of the temporary terminal building at Bendix Field, South Bend, Ind. (July 16).

E-698 approves agreement between United and West Coast Airlines relating to interline ticketing (July 16).

E-699 dismisses complaint of United requesting investigation of round trip passenger fares proposed by Southwest Airways Co. between points in Oregon and California (July 15).

E-700 consolidates three proceedings, dockets 2737, 3009, and 3010, having to do with investigations of free or reduced-rate transportation (July 18).

Airman Orders

S-86 denies petition of Patrica Wheelless, age 13, for a waiver of the regulations requiring an applicant for a student certificate to be 16 years of age (June 30).

S-87 amends initial examiner's decision dismissing the complaint against Philip H. Ellis and orders a 90-day suspension of his certificate. The Board finds that he operated his seaplane carelessly when he failed to observe a small boat in his take-off path in the water before he began his take-off run (June 30).

S-88 affirms examiner's findings in the case of Clyde H. Climer, commercial pilot with instructor rating, but changes the suspension time from 90 to 45 days (July 2).

S-89 reduces penalty imposed on William G. Lunsford, student pilot, from a revocation to a 6-month suspension (July 2).

S-90 affirms examiner's decision in the case of James Walter Hammond (July 2).

S-91 orders 6-month suspension of the student certificate held by Albert H. Hardin after finding that the emergency conditions cited by the examiner did not excuse Hardin from flying at less than 1,000 feet over Andalusia, Ala. (June 30).

S-92 denies motion of the CAA to reopen the hearing in the case of William H. Kempf after dismissal of the complaint by the examiner (July 11).

S-93 affirms examiner's order in the case of John Crittenden Green, Jr., holder of commercial certificate with flight instructor rating (July 16).

SD-317 suspends for 3 months, private certificate of Morris S. Curry for flying at less than 1,000 feet over an open air assembly of persons near Venice, Fla. (May 2).

SD-318 revokes student certificate of Lesmes R. Ruiz for carrying a passenger in the vicinity of Hayward Municipal Airport, Calif. (March 25).

SD-319 revokes private certificate of William Leo Singleton for low flying and performing acrobatics over Miami, Fla.; and carrying a passenger in acrobatic flight without parachute equipment (May 9).

SD-320 revokes student certificate of Woodrow T. Nicholas for carrying a passenger on a flight around the Memphis Flying Service Airport (May 23).

SD-321 revokes student certificate of W. C. Campbell for low flying and performing acrobatics in the vicinity of Miami, Fla. (May 8).

SD-322 suspends for 6 months, commercial certificate of Frank Rembrandt Griscom. He flew an aircraft for hire, carrying three passengers near Miami Beach without carrying a CAA airworthiness certificate—43.101; did not have a current operations record along—43.1010; the plane had not been given an annual inspection—43.22, or a periodic inspection within the preceding 100 hours of flight time—43.23; the plane was rated for only two persons—43.20; and the pilot performed aerobatics when his passengers did not have parachutes—43.409 (June 5).

SD-323 revokes private certificate of Charles Danley for low flying over a summer resort at Twin Lakes, Pa.; diving to an altitude of 5 to 6 feet near small boats on the lake; and performing aerobatics without parachutes while carrying a passenger. While making an approach near one of the boats, the left wing of the plane struck the water and crashed, damaging the plane and injuring Danley and his passenger (June 7).

SD-324 suspends for 6 months, commercial certificate of Bill Elsom for flying at an altitude of about 300 feet over Laramie, Wyo., and over an open-air assembly at the University of Wyoming. He also broke the weather rule of flying at an altitude of less than 700 feet when the visibility was less than one mile (May 8).

SD-325 suspends for 90 days, student certificate of Frank J. Mlejnek for flying at an altitude of between 300 and 400 feet over Omaha, Nebr., and operating aircraft in a careless manner (May 12).

SD-326 dismisses complaint against Norman W. Page upon request of CAA (May 15).

SD-327 suspends private certificate of Ernest L. Jones for 6 months and thereafter until he passes tests required for a private pilot rating. On one flight he performed a complete loop against the will and direction of his flight instructor who accompanied him, and when neither had parachutes. On another he flew over Mason City, Iowa, at an altitude insufficient to permit an emergency landing outside the congested area; and performed an aerobatic maneuver with two passengers in the plane when none of the occupants had parachutes (May 14).

SD-328 revokes student certificate of Giles P. Fowler. On one occassion he made a flight from Tampa to Lakeland, Fla., carrying a passenger—43.50. He made another flight at night without position light—60.108 (a); and was under the influence of intoxicating liquor (May 19).

SD-329 suspends for 60 days, commercial certificate of Fred R. Zaun for attempting a night landing without the requisite recent experience (five night landings and take-offs within the preceding 90 days, 43.681). During the landing he crashed into some low voltage power lines (May 19).

SD-330 suspends private certificate of Dana D. Cox for 9 months, or until he retakes and passes the private pilot's examination. Cox flew into a high-tension line at an altitude of about 75 feet while he was attempting to identify a motorcar and make his own identity known to its occupants. He was carrying a passenger (May 20).

SD-331 suspends for 30 days, commercial certificate of Albert Luff for landing and taking off from a State highway near Sprague, Wis., when he had not made definite arrangements to block the highway (May 20).

SD-332 suspends for 30 days, commercial certificate of Raymond H. Neisewander. He made two cross-country flights from Springfield, Ill., without a current medical certificate—43.402 (b); flew at night on another occasion without displaying position lights—60.108 (a); and failed to log his night flying time to substantiate recent experience—43.404 (June 3).

SD-333 revokes private certificate of Benjamin R. Bell and orders that he shall not be issued any type of airman certificate prior to November 20, 1947, and thereafter, until he has demonstrated, by competent proof, that he is not an addict or user of any kind of habit-forming drug (June 12).

SD-334 dismisses complaint against Arthur F. Silva (June 12).

SD-335 suspends for 6 months, student certificate of John D. Field for flying at an altitude of less than 500 feet near Frenchtown, N. J., so as to involve hazard to property on the surface. He flew at an altitude as low as 200 feet over the Delaware River, although he was unfamiliar with the terrain, and did not consult his aeronautical chart for known obstructions. As a result he collided with a cable strung across the river at an altitude of about 350 feet (June 20).

SD-336 revokes student certificate of Keith Jackson, Jr., for flying at an altitude of 300 feet over Roseville, Calif.; and performing aerobatics consisting of dives and pull-outs over residences of the city (June 17).

SD-337 suspends for 6 months, private certificate of Roger L. Rice. On flights near South Dayton and Perrysburg, N. Y., he performed aerobatics while carrying a passenger when occupants of the plane did not have parachutes. At South Dayton he landed in a hayfield with a growth of hay about 2 feet high, and afterward attempted to take off on a gravel road and crashed (March 21).

SD-338 suspends for 60 days, mechanic's certificate of Harold C. White for faulty installation of aileron control cables (May 16).

SD-339 suspends for 60 days, private certificate of Wade D. Young. On a flight near Mount Gilead, Ohio, he attempted an unnecessary landing on a highway and collided with a trailer (June 10).

SD-340 suspends for 90 days, private certificate of Homer H. Payne for carrying passengers for hire at Athens, Tenn. (June 26).

SD-341 suspends for 90 days, private certificate of George J. McCartney. While flying at 25 feet over a dry river bottom near Scottsdale, Ariz., he flew under high power lines and into a telephone line he didn't see, crashing and damaging a plane which didn't beong to him (June 25).

SD-342 suspends for 60 days, private certificate of James White for low flying and performing aerobatic maneuvers over St. Benedictine School buildings and homes in Cleveland, Ohio (June 9).

SD-343 revokes student certificate of K. H. Kincaid for carrying a passenger on a flight from Florence Junction, Ariz. The flight ended in a crash completely destroying the plane when an engine skip developed, causing the plane to lose altitude. In pleading for suspension rather than revocation, Kincaid said that his passenger was an ex-marine fighter pilot and he was under the impression until just before take-off that the CAA recognized a military license. The insurance company refused to pay because he had an unauthorized passenger aboard. The examiner, while recognizing the severity of the defendant's financial loss and other mitigating factors, stated that he did not believe them sufficient to cause the Board to depart from its policy of revoking the certificates of student pilots who carry passengers (May 27).

SD-344 suspends for 90 days, private certificate of Richard Carlson for flying at less than 100 feet over a friend of his who was driving a tractor near Phoenix, Ariz. (June 27).

SD-345 suspends for four months, private certificate of Rudger I. Adams for low flying and performing aerobatic maneuvers over residences near Mesa, Ariz. He performed the aerobatics with a passenger aboard when neither he nor his passenger had parachutes. As a result of the maneuvers, the plane stalled and crashed to the ground, injuring the pilot and his passenger and damaging the plane (June 2).

SD-346 dismisses complaint against Hugh S. Kline, commercial pilot with flight instructor rating. The defendant, engaged to carry passengers in an airshow at Augusta Airport, Waynesboro, Va., was involved in a collision on the runway with another plane. Examiner found that the revised traffic pattern Kline and the two other passenger-carrying planes were using was allowed by the airport manager's apparent consent; that testimony concerning the positions of the flags was contradictory; that Kline was unable to see the other plane after he landed; and that his attention during approach was directed toward clearing spectators from the end of the runway, where he had to come down, and observing obstructions. Examiner concluded that accident was result of a mismanaged airshow (June 20).

SD-347 suspends for 60 days, private certificate of Lee P.

Royster for careless operation of an aircraft near Southern Pines, N. C. (July 2).

SD–348 suspends flight instructor rating of Leslie L. Shull until he passes the practical examinations required for the original issuance of this rating (July 2).

SD–349 suspends for 6 months, commercial certificate of Horace J. Charles for low flying, and careless reckless operation over Buffalo, N. Y. (July 1).

SD–350 revokes student certificate of Edward S. Sakry. He made two flights with passengers on a farm near Santiago, Minn. While landing from the second flight, carrying a man and an 8-year-old girl, he crashed into a car injuring the occupant, barely missed 20 people in the vicinity, swerved to the right and hit some trees. He also flew outside the local practice area and used a plane model not endorsed by his instructor (July 2).

SD–351 revokes student certificate of James L. Cooperman for piloting an aircraft over Atlantic City and over persons on Atlantic City Beach at an altitude of approximately 300 feet (May 20).

SD–352 suspends for 30 days, commercial certificate of Westley G. Urquhart for low flying over Champaign and Urbana, Ill. (July 8).

SD–353 suspends for 4 months, commercial certificate of Don E. Eaton for low flying over Warrington, Fla., and performing aerobatics to an altitude as low as from 150 to 50 feet over the area. Warrington, the examiner pointed out is directly in the Corry Field (Navy) traffic pattern, as well as within the southwest leg of the Pensacola range (June 13).

SD–354 suspends for 60 days, private certificate of Oliver R. Bowers for flying at approximately 160 feet over Cerro Gordo, Ill., and performing aerobatics over the area (July 8).

SD–355 suspends for 6 months private certificate of Thomas Tucker for low flying and "zooming" over boats on Lake Hamilton, Ark. (July 8).

SD–356 suspends for 6 months student certificate of Robert E. Schnake. He made an unauthorized 15-mile flight from the practice area at Salem, Ill.. to Centralia where he flew low over his home several times, and struck a group of power, telephone and telegraph lines. In attempting to land in a small field adjoining a residence, he turned to avoid hitting a barn and came to a stop as the aircraft hit a fence. Examiner found that he violated sections 43.52, 60.105 (b) and 60.101 (July 10).

SD–357 suspends for 6 months pilot certificate of Howard R. Bartoo. While a student pilot he flew at an altitude between 25 and 50 feet over automobiles on a highway, and between 50 and 100 feet over buildings at Anthony, N. Mex. (May 20).

SD–358 suspends for 90 days student certificate of David Owen McRae who collided with another plane at McNary Field, Salem, Oreg. On overtaking the other plane, McRae failed to alter his course to the right—60.103 (c); flew within 500 feet of the plane without prearrangement—60.103 (d); and failed to observe another plane in flight and take precautions to avoid colliding with it. Examiner found that defendant's inexperience may have influenced his judgment on this occasion (July 10).

SD–359 suspends for 60 days commercial certificate of William D. Bozman for making a flight after dark from Mountain Home to Boise, Ida., when his plane was not equipped with position lights—60.108 (a) (July 9).

SD–360 suspends for 6 months private certificate of J. W. Ross for making a flight at La Mesa, Calif., in an aircraft which had not received the required annual inspection—43.22; and flying while under the influence of intoxicating liquor—43.406 (July 8).

SD–361 suspends for 4 months private certificate of Walter A. Phipps for flying at altitudes as low as 100 feet over Magdalena, N. Mex. (May 22).

SD–362 revokes private certificate of Rex S. Armour. He repeatedly flew his plane past a dormitory building on the campus of the North Texas Agricultural College, Arlington, Tex., at an altitude of 50 to 75 feet, coming below the windows of the third floor. In addition, he performed aerobatics, including snap rolls, slow rolls and loops, over buildings on the campus (July 8).

SD–363 suspends for 10 days A & E mechanic certificate of Francis R. Parkman for permitting faulty repair work and certifying that the plane on which the work was performed was put in airworthy condition. In supervising the job of putting new fabric on the fuselage, he permitted the fabric to be joined to the old fabric in a manner which was unworkmanlike and unsafe (May 26).

SD–364 suspends for at least 3 months, and until he passes a complete medical examination, the student certificate of Stanley Bennett. Examiner found that he flew over Ellsworth, Wis., at an altitude insufficient to permit emergency landing outside the congested area; and also that he suffers from an indeterminate nervous condition of medical and combat origin which may make him ineligible for an airman's certificate (May 28).

SD–365 suspends for 6 months student certificate of Frank Vaiarelle. With only 45 minutes solo flight time he flew over Fresno, Calif., at an altitude of 150 to 200 feet. The flight was outside the area designated by his instructor (July 15).

SD–366 suspends for 30 days commercial certificate of Robert H. Hemphill, III, for low flying at Summerville, S. C. (July 15).

SD–367 suspends for 6 months student certificate of William J. Schmitt for low flying over the lake front and Government pier at Sheboygen, Wis. Examiner found that he "buzzed" a sailboat, "hedge-hopped" over the pier and made sharp turns and climbs, thereby operating the plane in a careless, reckless manner (July 15).

SD–368 suspends for 10 days private certificate of James E. Owens for operating an aircraft without an airworthiness certificate or special CAA authorization (July 16).

SD–369 revokes commercial certificate of Ishmael W. Boles. He made a flight at Alamogordo and Ruidoso, N. Mex., in an unairworthy aircraft—43.20; carried passengers in a type and class of plane for which he was not rated—43.63; carried two passengers who were under the influence of intoxicating liquor—43.406; and in landing at the Alamogordo Airport failed to observe other traffic and to conform to the flow of traffic, thereby failing to take precaution to avoid collision—60.106 (a) (May 23).

SD–370 dismisses complaint against Kermit C. Nelson, student pilot, upon finding that the evidence does not establish any violation of the regulations (June 29).

SD–371 revokes commercial certificate of Charles J. Misiaszek. He failed to pass the reflight examination at Hartford, Conn., demonstrating that he did not possess the skill required of the holder of a commercial pilot rating (May 21).

SD–372 suspends for 30 days A & E mechanic certificate of Alfred C. Worthy for approving an unworthy aircraft. Although the plane was certificated for night flight, the battery glasses and bulbs had been removed; the muffler had a crack four inches long; the exhaust pipe had two holes in it on the firewall side; the aileron control cable bolts were covered with dirt and grease; one wheel was very loose; and the aircraft was in a dirty condition so that it could not be inspected at that time. He violated section 43.23 (June 6).

SD–373 suspends for 6 months student certificate of Donald Logan. He flew at altitudes varying from 25 to 100 feet above cottages and boats at Ricomo Beach, Bay City, Mich., making steep climbs, banks, turns and dives on the flight so as to endanger property and the lives of the occupants (June 4).

SD–374 suspends for 30 days commercial certificate of Ray S. Jones. While a private pilot he endangered property by flying at 120 feet over the Salinas River near San Lucas, Calif. He struck and severed power lines spanning the river bed. As in previous cases where a 6-month penalty was imposed, Jones did not carry a passenger, he was flying his own plane, and has paid the cost of repairing the lines (July 8).

SD–375 dismisses complaint against Clarence R. Hopkins, commercial pilot, upon finding that he did not violate the regulations in flying at less than 200 feet while making a landing at an airport at South Lee, Mass. (May 23).

Air Regulations . *on August 1, 1947*

Title	No.	Part: Price	Part: Date	Part: No. of Amendments	Manual: Price	Manual: Date	Manual: No. of Amendments
Aircraft							
Airworthiness Certificates	01	$0.05	10/15/42	2	None	None	.....
Type and Production Certificates	02	.05	7/1/46	1	$0.10	8/1/46	.....
Airplane Airworthiness—Normal, Utility, Acrobatic, and Restricted Purpose Categories	[1] 03	.25	12/15/46	2	None	None	.....
Airplane Airworthiness	04a	.15	11/1/43	7	.45	7/1/44	2
Airplane Airworthiness Transport Categories	[1] 04b	Free	11/9/45	5	None	None	.....
Rotorcraft Airworthiness	06	.10	5/24/46	.....	None	None	.....
Aircraft Airworthiness, Limited Category	09	.05	11/21/46	.....	None	None	.....
Engine Airworthiness	13	.05	8/1/41	.....	None	None	.....
Propeller Airworthiness	14	.05	7/15/42	1	.15	5/1/46	.....
Equipment Airworthiness	15	.05	5/31/46	.....	No stock	7/1/38	.....
Radio Equipment Airworthiness	16	.05	2/13/41	.....	Free	2/13/41	1
Maintenance, Repair, and Alteration of Aircraft, Engines, Propellers, Instruments	18	.05	9/1/42	.....	.50	6/1/43	.....
Airmen							
Pilot Certificates	20	.05	7/1/45	7	None	None	.....
Airline Pilot Rating	21	.05	10/1/42	4	None	None	.....
Lighter-than-air Pilot Certificates	22	.05	10/15/42	2	None	None	.....
Mechanic Certificates	24	.05	7/1/43	[2] 2	None	None	.....
Parachute Technician Certificates	25	.05	12/15/43	4	None	None	.....
Traffic Control Tower Operator Certificates	26	.05	10/10/45	2	None	None	.....
Aircraft Dispatcher Certificates	27	.05	7/1/46	1	None	None	.....
Physical Standards for Airmen	29	.05	1/10/46	.....	None	None	.....
Flight Radio Operator Certificates	33	Free	8/1/47	.....	None	None	.....
Flight Navigator Certificates	34	Free	8/1/47	.....	None	None	.....
Flight Engineer Certificates	35	.05	3/15/47	1	None	None	.....
Operation Rules							
Air Carrier Operating Certification	40	.10	7/10/46	[3] 1	None	None	.....
Scheduled Air Carrier Operations Outside Continental United States	41	.05	5/1/46	[4] 8	None	None	.....
Nonscheduled Air Carrier Certification and Operation Rules	42	.05	8/1/46	[4] 5	.15	11/1/46	.....
General Operation Rules	43	.05	7/1/45	[5] 9	None	None	.....
Foreign Air Carrier Regulations	44	.05	7/1/45	1	None	None	.....
Transportation of Explosives and other Dangerous Articles	49	.05	7/1/45	.....	None	None	.....
Air Agencies							
Airman Agency Certificates	50	.05	4/30/46	.....	.15	5/15/46	1
Ground Instructor Rating	51	.05	12/15/43	2	None	None	.....
Repair Station Rating	52	.05	10/1/42	.....	Free	2/41	.....
Mechanic School Rating	53	.05	8/1/42	1	Free	5/40	.....
Parachute Loft Certificates and Ratings	54	.05	1/21/43	.....	None	None	.....
Air Navigation							
Air Traffic Rules	60	.05	8/1/45	[3] 2	.15	10/45	.....
Scheduled Air Carrier Rules	61	.10	8/1/46	[6] 7	None	None	.....
Miscellaneous							
Rules of Practice Governing Suspension and Revocation Proceedings	97	Free	1/1/47	1	None	None	.....
Definitions	98	No stock	10/15/42	.....	None	None	.....
Mode of Citation	99	Free	11/15/40	.....	None	None	.....
Regulations of the Administrator							
Aircraft Registration Certificates	501	Free	5/1/47	.....	None	None	.....
Dealers Registration Certificates	502	Free	5/1/47	.....	None	None	.....
Recordation of Aircraft Ownership	503	Free	5/1/47	.....	None	None	.....
Notice of Construction or Alteration of Structures on or near Civil Airways	525	Free	7/23/43	.....	None	None	.....
Seizure of Aircraft	531	Free	12/8/41	.....	None	None	.....
Reproduction and Dissemination of Current Examination Materials	532	Free	1/15/43	.....	None	None	.....
Federal Aid to Public Agencies for Development of Public Airports	550	Free	1/9/47	.....	None	None	.....
Acquisition by Public Agencies for Public Airport Purposes of Land Owned or Controlled by the United States	555	Free	1/9/47	.....	None	None	.....
Claims for Reimbursement for Rehabilitarion or Repair of Public Airports Damaged by Federal Agencies	560	Free	1/9/47	.....	None	None	.....

[1] Certain aircraft may comply with the provisions of this part or part 04a.
[2] Special regulatios 340 and 340C.
[3] Special regulations 361A, 361C.
[4] Special regulations 385 and 390.
[5] 43–1, 43–3, 43–5 are obsolete.
[6] Special regulations 361A, 361C, 385 and 390.

NOTE: Those parts and manuals for which there is a price are obtained from the Superintendent of Documents, Government Printing Office, Washington 25, D. C. Remittances should be by check or money order, payable to the Superintendent. Currency is sent at sender's risk. Amendments and free Parts are obtained from the Publications Section, Civil Aeronautics Board, Washington 25, D. C.; free Manuals and Regulations of the Administrator from the CAA Office of Aviation Information, Dept. of Commerce, Washington 25, D. C.

Regulations

Amdt. 20–6 ..... Effective July 22, 1947

Under the following amendment to Part 20, private and commercial pilots who allowed their certificates to expire on July 1 without exchanging them for the new type required, may get the new certificates simply by applying to the CAA.

20.550 Reissuance. Any person who on June 30, 1947, held a valid private or commercial certificate and who failed to exchange such certificate in accordance with section 20.55 of the Civil Air Regulations, may, notwithstanding such failure and without other showing, obtain a pilot certificate with appropriate ratings upon application to the Administrator.

(See Regulations page 95)

Domestic Scheduled Air Carrier Operations

Operations for May 1947

Source: CAB Form 41

Operator	Revenue miles	Revenue passengers (unduplicated)	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
American Airlines, Inc	5,046,303	253,622	129,954	1,904.0	380,892	622,141	162,936	79.76
Braniff Airways, Inc	959,194	53,649	17,597	192.0	63,617	24,227	27,153	64.81
Chicago & Southern Air Lines, Inc	626,431	28,617	10,742	210.0	53,812	28,709	16,559	64.87
Colonial Airlines, Inc	314,189	11,751	3,347	20.5	4,247	0	6,193	54.04
Continental Air Lines, Inc	428,857	15,903	5,158	36.0	7,199	7,660	8,840	58.35
Delta Air Lines, Inc	985,016	45,333	17,655	214.0	56,424	50,425	27,313	64.64
Eastern Air Lines, Inc	3,695,343	153,733	74,794	793.4	323,521	137,014	107,165	69.79
Inland Air Lines, Inc	211,328	7,700	2,840	18.0	4,311	3,089	4,148	68.47
Mid-Continent Airlines, Inc	574,770	24,076	7,435	50.0	10,598	5,978	11,481	64.76
National Airlines, Inc	921,374	30,699	14,696	91.8	41,259	17,201	26,823	54.79
Northeast Airlines, Inc	284,894	26,572	4,983	52.8	6,708	1,588	9,178	54.29
Northwest Airlines, Inc	1,562,403	64,697	34,360	332.3	137,667	59,600	47,899	71.73
Pennsylvania-Central Airlines Corp	1,591,136	119,466	32,067	1,081.0	193,671	134,818	53,692	59.72
Transcontinental & Western Air, Inc	4,116,566	93,456	74,380	933.0	408,537	331,328	99,860	74.48
United Air Lines, Inc	5,031,879	179,348	109,677	1,686.0	585,246	634,769	133,959	81.87
Western Air Lines, Inc	644,671	42,852	16,904	190.0	40,082	39,114	24,632	68.63
Total	26,994,354	1,151,474	556,589	7,804.8	2,317,791	2,097,661	767,831	72.49

Operations for the First 5 Months of 1947 as Compared With the Same Period of 1946

Operator	Revenue miles, January–May		Revenue passengers (unduplicated), January–May		Revenue passenger-miles (000), January–May		Express and freight (tons), January–May	
	1947	1946	1947	1946	1947	1946	1947	1946
American Airlines, Inc	23,700,080	23,268,131	1,033,103	775,524	524,847	425,780	9,799.0	5,167.0
Braniff Airways, Inc	4,426,011	4,239,534	227,037	178,052	77,471	74,725	996.0	632.9
Chicago & Southern Air Lines, Inc	2,802,193	2,989,512	113,091	123,241	43,942	50,397	888.0	424.0
Colonial Airlines, Inc	1,101,018	1,055,695	45,392	50,507	13,069	15,247	100.2	58.5
Continental Air Lines, Inc	1,928,236	1,975,678	66,214	72,565	21,641	26,850	170.0	80.4
Delta Air Lines, Inc	4,638,781	3,815,218	196,667	170,197	88,847	71,567	1,194.0	362.0
Eastern Air Lines, Inc	18,275,460	15,001,674	696,169	525,706	391,839	275,431	3,740.0	1,925.9
Inland Air Lines, Inc	851,394	820,219	30,692	29,144	9,532	8,047	52.1	24.9
Mid-Continent Airlines, Inc	2,345,381	1,920,574	97,334	92,152	30,104	28,056	206.1	146.1
National Airlines, Inc	4,180,972	3,310,055	140,975	95,227	78,514	55,715	510.4	170.5
Northeast Airlines, Inc	1,500,623	1,270,236	124,794	119,612	23,472	24,411	306.3	119.9
Northwest Airlines, Inc	7,097,830	6,767,533	246,940	204,502	126,226	122,873	1,424.7	657.4
Pennsylvania-Central Airlines Corp	6,438,662	6,573,454	422,878	445,144	109,669	129,723	5,302.0	1,595.0
Transcontinental & Western Air, Inc	17,933,823	16,657,695	358,489	346,559	277,457	305,307	4,481.0	3,853.0
United Air Lines, Inc	22,437,766	20,702,653	688,913	573,351	420,648	355,914	7,557.0	3,158.4
Western Air Lines, Inc	3,132,015	3,163,977	185,509	158,890	71,202	59,269	892.9	413.9
Total	122,790,245	113,531,838	4,674,197	3,960,373	2,308,480	2,029,312	37619.7	18,789.8
Index (1946=100)	108.15	100.00	118.02	100.00	113.76	100.00	200.21	100.00

Operator	Ton-miles flown				Passenger seat-miles (000), January–May		Revenue passenger load factor (percent), January–May	
	Express, January–May		Freight, January–May					
	1947	1946	1947	1946	1947	1946	1947	1946
American Airlines, Inc	1,988,634	1,612,304	3,088,659	1,278,034	744,682	492,218	70.48	86.50
Braniff Airways, Inc	324,950	195,305	107,623	71,182	125,837	85,215	61.56	87.69
Chicago & Southern Air Lines, Inc	258,832	156,039	96,472	0	73,422	62,424	59.85	80.73
Colonial Airlines, Inc	19,397	14,498	0	0	21,661	22,032	60.33	69.20
Continental Air Lines, Inc	33,367	24,254	41,718	7,267	39,725	40,996	54.48	65.49
Delta Air Lines, Inc	300,182	174,561	221,846	0	133,728	88,453	66.44	80.91
Eastern Air Lines, Inc	1,626,315	1,170,778	599,474	92,781	556,467	314,934	70.42	87.46
Inland Air Lines, Inc	12,576	5,572	7,551	0	16,362	13,460	58.26	59.78
Mid-Continent Airlines, Inc	50,964	53,389	20,206	0	47,187	36,271	63.80	77.35
National Airlines, Inc	147,526	98,527	254,179	0	119,978	64,888	65.44	85.86
Northeast Airlines, Inc	41,879	21,347	4,938	0	48,412	32,404	48.48	75.33
Northwest Airlines, Inc	652,477	379,779	196,566	0	199,999	142,340	63.11	86.32
Pennsylvania-Central Airlines Corp	953,685	367,625	718,262	0	211,718	166,931	51.80	77.71
Transcontinental & Western Air, Inc	2,202,327	1,563,278	1,476,070	618,527	422,276	351,334	65.71	86.90
United Air Lines, Inc	2,732,592	1,830,320	3,200,575	998,235	560,682	414,810	75.02	85.80
Western Air Lines, Inc	195,091	117,154	171,855	24,046	117,394	75,163	60.65	78.85
Total	11,540,794	7,784,730	10,205,994	3,090,072	3,439,530	2,403,873	67.12	84.42
Index (1946=100)	148.25	100.00	330.28	100.00	143.08	100.00	79.51	100.00

Passenger-miles flown (total revenue and nonrevenue, in thousands) January—388,289; February—380,606; March—503,466; April—535,254; May—574,303; Total—2,381,918.

Territorial Scheduled Air Carrier Operations

Operations For April and May, 1947

Operator	Revenue miles		Revenue passengers		Revenue passenger-miles (000)		Express and freight (tons)	
	April	May	April	May	April	May	April	May
Caribbean-Atlantic Airlines, Inc	31,993	33,712	6,000	5,779	371	352	10.2	9.7
Hawaiian Airlines, Ltd	197,219	198,492	23,102	21,444	3,172	3,007	385.0	444.0
Total	229,212	232,204	29,102	27,223	3,543	3,359	395.2	453.7

Territorial Scheduled Air Carriers Operations—Continued

Operator	Ton-miles flown				Passenger seat-miles (000)		Revenue passenger load factor (percent)	
	Express		Freight					
	April	May	April	May	April	May	April	May
Caribbean-Atlantic Airlines, Inc	0	0	664	680	778	810	47.69	43.46
Hawaiian Airlines, Ltd	7,925	7,893	50,950	59,909	4,002	3,913	79.26	76.85
Total	7,925	7,893	51,614	60,589	4,780	4,723	74.12	71.12

International and Overseas Scheduled Air Carrier Operations—April 1947

Operator	Revenue miles	Revenue passengers	Revenue passenger-miles (000)	Express and freight (tons)	Ton-miles flown		Passenger seat-miles (000)	Revenue passenger load factor (percent)
					Express	Freight		
American Airlines, Inc	229,421	6,039	4,653	189.0	0	113,689	8,847	52.59
American Overseas Airlines, Inc	587,023	3,974	11,121	35.4	113,823	0	18,294	60.79
Chicago & Southern Air Lines, Inc	36,990	618	423	6.0	0	3,824	1,665	25.41
Eastern Air Lines, Inc	60,060	1,204	1,205	13.0	0	12,535	2,996	40.22
National Airlines, Inc	34,198	2,588	801	10.0	3,395	0	1,573	50.92
Northwest Airlines, Inc	148,829	1,360	2,173	11.8	6,611	12,102	5,978	36.35
Pan American Airways, Inc.:								
Atlantic Division	824,688	10,885	22,288	80.6	259,373	0	30,168	73.88
Latin American Division	2,590,710	58,743	44,407	1,049.0	1,394,515	0	90,414	49.12
Alaska Operations	212,251	2,409	2,444	24.0	26,959	0	4,913	49.75
Pacific Operations	608,414	3,828	11,945	53.0	218,164	0	16,496	72.41
Pan American-Grace Airways, Inc	513,302	10,049	8,897	340.0	132,448	0	15,911	55.92
Transcontinental & Western Air, Inc	640,828	4,831	16,040	65.0	271,391	0	18,974	84.54
Uraba, Medellin & Central Airways, Inc	19,488	379	122	18.0	5,570	0	315	38.73
Total	6,506,202	106,907	126,519	1,894.8	2,432,249	142,150	216,544	58.43

Regulations

(*Continued from page 93*)

Admt. 20–7—Effective July 22, 1947

Under the following changes to Part 20, the CAA Administrator may appoint a representative to issue student-pilot certificates. Students, as well as private and commercial pilots, may use temporary 90-day certificates to bridge the gap between fulfillment of requirements and receipt of regular certificates. Private and commercial certificates, which previously expired every 2 years, are now good indefinitely.

1. Amend section 20.00, Issuance, to read:

20.00 Issuance. A student-pilot certificate will be issued by the Administrator or his authorized representative to an applicant who meets the applicable requirements.

2. Amend section 20.51, Duration, to read:

20.51 Duration.

(*a*) A student-pilot certificate shall expire 24 calendar months after the month of issuance.

(*b*) A pilot certificate with a private or commercial rating shall remain in effect unless it is suspended, or revoked, or a general termination date for such certificate is fixed by the Board.

3. Amend section 20.52, Renewals, to read:

20.52 Temporary certificates. The Administrator or his authorized representative may issue a temporary student-pilot certificate or a temporary pilot certificate with a private or commercial rating for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

4. Section 20.53, Reinstatement, is repealed.

Amdt. 24–2—Effective June 27, 1947

Add new section 24.33 as follows:

24.33 Temporary certificates. The Administrator or his authorized representative may issue a temporary mechanic certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

Amdt. 25–4—Effective June 27, 1947

1. Amend section 25.70 to read:

25.70 Duration. A parachute technician certificate shall remain in effect unless it is suspended, or revoked, or until a general termination date for such certificate is fixed by the Board.

2. Add a new section 25.701 to read:

25.701 Temporary certificates. The Administrator or his authorized representative may issue a temporary parachute technician certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

Amdt. 26–2—Effective June 27, 1947

Amend section 26.40 to read:

26.40 Temporary certificates. The Administrator or his authorized representative may issue a temporary air-traffic control-tower operator certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

Amdt. 27–1—Effective June 27, 1947

Add section 27.220 to read:

27.220 Temporary certificates. The Administrator or his authorized representative may issue a temporary aircraft dispatcher certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

Amdt. 51–2—Effective June 27, 1947

Add new section 51.220 as follows:

51.220 Temporary certificates. The Administrator or his authorized representative may issue a temporary ground instructor certificate for a period of not to exceed 90 days, subject to the terms and conditions specified therein by the Administrator.

(The above amendments to Parts 24, 25, 26, 27, and 51 permit temporary 90-day certificates to be issued to mechanics, parachute technicians, air traffic control operators, aircraft dispatchers and ground instructors for use until the regular certificates are processed by the CAA Washington office. Previously issued from CAA field offices, the job of handling the regular certificates was transferred to the Washington office June 30.)

Admt. 41–7—Effective Aug. 18, 1947

The following amendment will permit Alaskan air carriers who are unable to meet all the requirements of Part 41 to continue operation until October 31, 1948, under special terms in their operating certificates.

41.000 Alaskan air carriers. Whenever, upon investigation, the Administrator finds that the general standards of safety required for air carrier operations within the Territory of Alaska require or permit a deviation from any specific requirement of part 41 for a particular operation or a class of operations for which an application for an air carrier operating certificate has been made, he may issue an air carrier operating certificate with appropriate changes, specifying therein the period during which such deviations may be permitted. The Administrator shall promptly notify the Board of any deviations included in the air carrier operating certificates and the reasons therefor. All certificates issued under the authority of this section shall terminate not later than October 31, 1948.

Amdt. 61–7—Effective July 15, 1947

Authority to sign clearance forms for flights, load aircraft and sign load manifest forms may be delegated to persons who are not employed by the air line operating the plane, under the following revisions to part 61. The air line's aircraft dispatcher and other personnel were previously required to perform these tasks.

1. Amend section 61.7102 to read:

61.7102 Clearance and load manifest forms. The clearance and load manifest forms used shall be approved by the Administrator. The original copies of such forms shall be given to the first pilot and duplicate copies kept in the station file for at least 30 days.

2. Add two new sections to read as follows:

61.71020 Preparation of clearance form. A clearance form shall be prepared for each flight between specified clearance points. The information for such clearance shall be prepared by the authorized aircraft dispatcher of the air carrier operating the aircraft. This form shall be signed by the first pilot and by the authorized aircraft dispatcher only when both believe the flight may be made with safety. The authority to sign such clearance may be delegated for a particular flight by the authorized aircraft dispatcher, but the authority to dispatch cannot be delegated and such dispatcher remains responsible for the dispatch and continued supervision of the flight.

61.71021 Preparation of load manifest form. A manifest form showing the loading of the aircraft shall be prepared and signed for each flight by qualified personnel of the air carrier charged with the duty of supervising the loading of the aircraft and the preparation of the load manifest forms, or by qualified persons authorized by the air carrier. The aircraft when loaded shall not exceed the center of gravity limits or maximum allowable weight limits set forth in the aircraft certificate for the particular aircraft.

3. Section 61.7103 is repealed.

Reg. 340–C—Effective June 30, 1947

Amend Special Civil Air Regulation 340 by striking the words "June 30, 1947" and inserting in their place the words "December 31, 1947".

(This amendment extends for another six months the provisions for licensing propeller or appliance mechanics.)

CAA and CAB Releases

Copies of CAA releases may be obtained from the CAA Office of Aviation Information. CAB releases are obtainable from the Public Information Section of the Board. Both offices are located in the Department of Commerce Building, Washington 25, D. C.

Administration

Push Investigation of Psychological Factors for Safer Flying (June 30).

CAA Places Models of Historical Planes on Display (July 4).

CAA Sponsors Landing Gear Study on Seven Types of Planes (July 8).

Planes and Airports Increase CAA Statistics Show (July 15).

Robertson, Lanter and Devlin Shifted in CAA Posts (July 11).

Latin American Leaders Study U. S. Aviation (July 16).

Mexican Inspectors at Texas Airport to Speed Clearances (July 19).

CAA Expert Tells Plans for Seaplane Bases (July 23).

1,594 California High School Students and Teachers fly as CAA-Aided Aviation Education Program Spreads (July 23).

Board

First interim report of Special Board of Inquiry on Air Safety (June 28).

Second interim report of Special Board of Inquiry on Air Safety (July 2).

ACC directs study of aircraft production in interests of national defense policies (July 7).

Third interim to the President by the Special Inquiry Board (July 7).

President's Special Inquiry Board Announces Public Hearing July 10 on proposed runway lengths for 4-engine aircraft (July 8).

Second part of hearing on Eastern Air Line accident near Bainbridge, Md., set for July 17 (July 10).

Mail pay set for Pan American Alaskan Operations (July 10).

CAB sets mail pay rates for Pioneer Airlines (July 11).

ENGINEERING LIBRARY
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The 20-foot Cayley glider, 1804, made the first recorded glider flight. Sir George Cayley's coachman, pressed into service as a passenger, was lifted a few feet off the ground and carried a short distance.

Exhibit of Glider and Plane Models Tells Story of Man's Efforts To Fly

Amazingly detailed models of airplanes and gliders which tell the long story of man's effort to fly are now on display at the Commerce Building. They are gifts to the Civil Aeronautics Administration by Paul K. Guillow, model manufacturer of Wakefield, Mass., and are historically and aeronautically accurate.

Consisting of 23 models, the group covers the period from the time the first man left the ground on handmade wings in 1810 to the flights of the Wright Brothers at Kitty Hawk in 1903. James Madison was our fourth President when Sir George Cayley pressed his coachman into service as the first aviator.

Guillow's models, include the glider in which Sir George, at his Brompton Falls estate, Yorkshire, England, launched the un-named bellwether who was lifted a few feet off the earth and carried only a short distance. The glider had wings 25 feet long and 5 feet wide with a tail surface for balancing. Its total length was 20 feet, and it was somewhat similar to the familiar airplane form of today.

Nearly a hundred years later, Theodore Roosevelt was our twenty-fifth President—and the first Chief Executive to take a flight—when Orville Wright flew 120 feet in a powered, heavier-than-air machine.

The Wright model is a fine example of the model builder's art. Guillow's work shows the results of long and intelligent technical study. With some models, as with the Wright plane, he had complete physical measurements and photographs easily at hand. To build an accurate model of others, he had to research vigorously through early aeronautical history.

The model of the Alphonse Penaud plane of 1876 is a good example of one on which limited information was available. Penaud, young French aeronautical genius, assisted by his mechanic, Paul Gauchot, patented an amphibious plane in that year which had retractable landing gear, a thick wing section, balanced steering surfaces, two propellers with blades adjustable in flight, and an automatic pilot. Guillow's model of this plane is considered one of his best.

In announcing the display, T. P. Wright, Administrator of Civil Aeronautics, issued an invitation to the students of all schools in the country who are studying aeronautical subjects, to include the models on their Washington itineraries. Under the direction of Howard W. Sinclair, Director of Aviation Training, representatives of the training office will be available in Washington to discuss the models with interested instructors and teachers.

The models in the collection include the following:

Sir George Cayley's model glider (1804); Walker's designs for glider (1810), tandem glider (1831) and airplane (1831); Henson's steam airplane design, man-carrying, proposed for use on air line between England and India, but never completed (1842); Stringfellow's steam-powered model airplane, which made the first successful steam-powered model flights (1848); Wenham's man-carrying multiplane design, which represents first use of multiple wings (1866).

Penaud's model airplane, the first to fly with rubber bands for power, and the first model to use dihedral (1870); Lilienthal's bird kites—sailing flights of birds had great influence on Lilienthal (1874); Penaud and Gauchot airplane design, a man-carrying plane far in advance of its day, but never completed. It was the first to use retractable landing gear and balanced rudder (1876).

Montgomery man-carrying glider which made the first glider flight in America (1884); Lilienthal man-carrying glider. Otto Lilienthal made more than a thousand successful glider flights. Lateral control was effected by shifting his body weight (1891); Hargrave's box kite with cambered surfaces. His successful experiments in New South Wales influenced airplane designers throughout the world (1893).

Lilienthal model biplane glider (1895); Lilienthal man-carrying biplane glider showing influence of Hargrave—Lilienthal was killed in crash of this glider (1895); Chanute multiplane glider, man-carrying, which was used by Chanute in his early attempts at gliding in Illinois (1895); Chanute man-carrying biplane glider which was his best effort, and considered an improvement of Lilienthal gliders. It made use of bridge trussing principles (1896).

Moy, Chanute, and Herring airplane based on data from British Patent Office. Compressed air motor was used unsuccessfully (1897); Wright Brothers' airplane kite used to prove their principle of wing warping (1899); Wright Brothers' man-carrying glider, flown first as a kite, then as a glider. It was the first glider to use their principle of wing warping for lateral control (1900).

Langley's aerodrome which attempted a man-carrying flight (1903); Wright Brothers' 1903 airplane which made the first successful man-carrying powered flights in the world. It was the first airplane with lateral controls (1903).

Crosswind Gear For Feeder Plane Seventh Under CAA

With the signing of a contract for design of a crosswind landing gear on a feeder type airliner, the Civil Aeronautics Administration now has seven such projects either completed or under way, and has fully committed its funds of $150,000 for such development.

Northrop Aircraft, Inc., builders of the trimotored Pioneer transport, will provide the CAA with all engineering data, blueprints, stress analysis and weight reports for application of a castered-wheel landing gear to this new plane, which was selected because of its significance in feeder air-line operations. This leads up to Northrop's building the gear and testing it on their own plane, although this is not included in the CAA's contract. The contract price is $10,000.

Transport Project.—The sixth contract signed by the CAA is with the Goodyear Aircraft Corp. for design and test of a castered-wheel landing gear on a DC–3 transport. This gear is to be applied to a plane belonging to the CAA, and its development is covered in a contract amounting to $46,800. Tests and stress analysis necessary for issuance of an NC license for the modified DC–3 call for an additional $5,000.

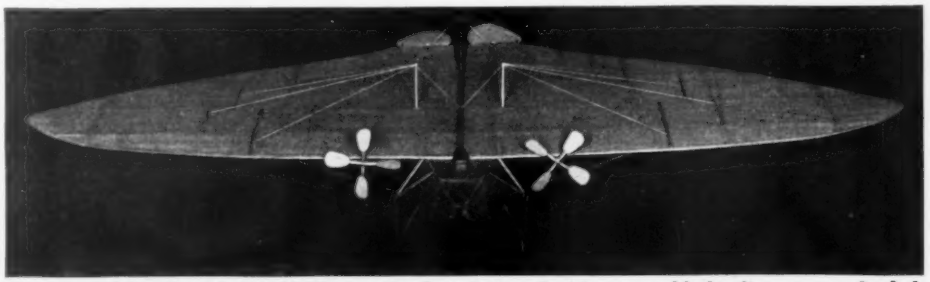
Another recent contract is with the Bellanca Aircraft Corp. for $5,650 for design, construction and test of a castered-wheel gear for the four-place Bellanca Cruisair.

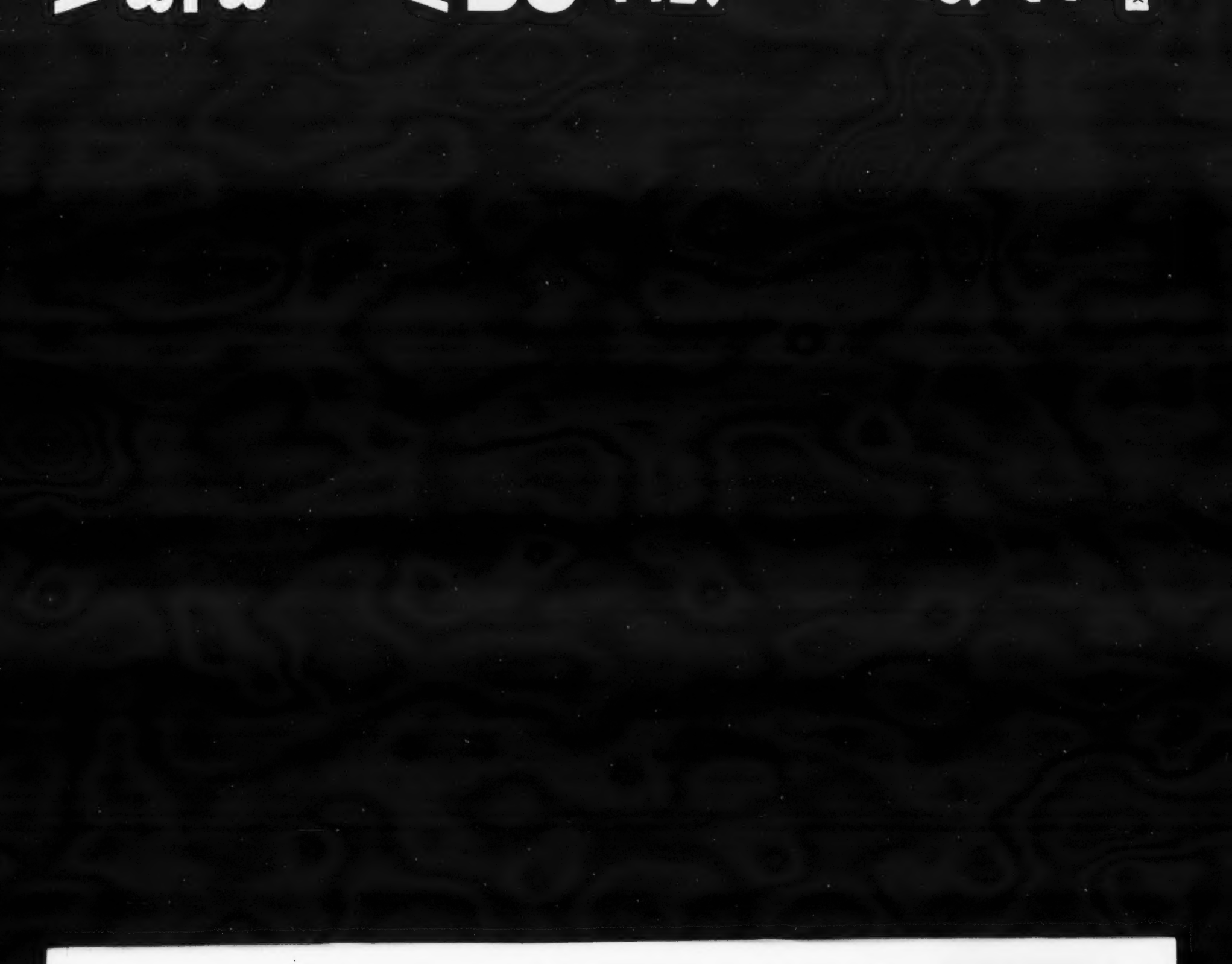
All American Aviation is working on a contract amounting to $35,000 for application of the castered-wheel principle to a twin-engined Beech plane.

One other contract is under way, that with Firestone Aircraft Co., which is applying crosswind gear to the tricycle-landing gear Ercoupe under a $12,000 contract.

Two Contracts Completed.—Two contracts already have been completed successfully. These were with the Goodyear Aircraft Corp. to convert a Piper Cub, for which the CAA paid $22,000 and with the Fairchild Personal Planes Division of the Fairchild Aviation Corp., which was paid $8,413.42 for applying the gear to one of its training planes.

"We consider that this relatively small development fund of $150,000 has been spread over a desirably wide range of United States aircraft types," T. P. Wright, Administrator of Civil Aeronautics, said in discussing the program. "We look forward now to the completion of current contracts to be followed by wide adoption of the principle in production models so that the inherent advantages afforded can be realized to the benefit of aircraft users and airport developers. Credit for utilizing this research money to such good advantage goes to John H. Geisse, consultant to the CAA for this particular program, and to H. Lloyd Child, Assistant to the Administrator for Personal Flying Development."



The Penaud-Gauchot plane of 1876 was the first designed with retractable landing gear and a balanced rudder The blades of the two propellers were adjustable.

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